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ABSTRACT

This drafting criterion-referenced test item bank is keyed to the machine shop competency profile developed by industry and education professionals in Missouri. The 16 references used for drafting the test items are listed. Test items are arranged under these categories: orientation to machine shop; performing mathematical calculations; performing precision measurement; blueprint reading; performing bench work; introduction to material science; operating power saws; operating drill presses; operating lathes; operating milling machines; operating grinders; tool and cutter grinding; concepts of numerical controlled machines; and leadership. The following information is provided for each test item: unique item number; duty area and task number (Missouri competency profile); letter of correct answer; source; date; learning domain (cognitive, affective, psychomotor); writer(s)/reviewer(s); and accompanying artwork. (YLB)

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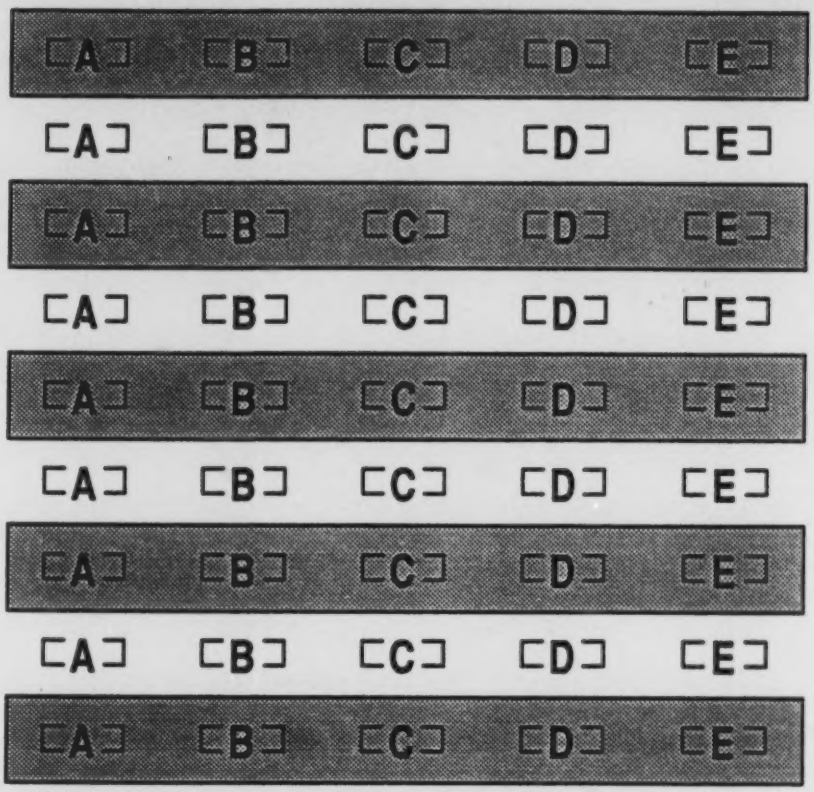

Criterion-Referenced Test Items for MACHINE SHOP

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Criterion-Referenced Test (CRT) Items for
MACHINE SHOP

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FOREWORD

Rapid advances in technology are placing heavy demands on both teachers and students in vocational education. These Criterion-Referenced Test Items for Machine Shop are designed to help meet those demands.

All test writers face one basic challenge: to produce test items that accurately measure what they are intended to measure. This challenge was kept firmly in mind by all those who participated in the development of the bank. The items in the bank are based upon competencies found on the Missouri Machine Shop Competency Profile. Much care was taken to ensure that the test items will accurately measure a student's knowledge in regard to these competencies. Every effort was made to ensure the items are presented in a fair and unbiased matter.

The items in this book are designed to work with both the Vocational Instructional Management System (VIMS) and VAMS. The test item bank will allow instructors and administrators to manage testing and evaluation activities in the most efficient way possible. Instructors pulling items from this bank for individual tests should still evaluate the new test to see that one question does not give away the answer to another question. For word processing and test-item generation purposes, an ASCII disk of the item bank has been included with this printed copy.

This test bank should be viewed as a beginning. It is hoped that future revisions and additions will build the bank into an even more powerful and reliable evaluation and management tool.

Judith Moore, supervisor
Industrial Education
Department of Elementary and Secondary Education

Charles "Chuck" Waibel, director
Industrial Education
Department of Elementary and Secondary Education

ACKNOWLEDGMENTS

These Criterion-Referenced Test (CRT) items for Machine Shop represent a continuing commitment to Missouri's Vocational Instructional Management System (VIMS). The bank is keyed to the Machine Shop Competency Profile developed by industry and education professionals in the state. The cycle of curriculum development includes the following steps:

1. Development of the competency profile
2. Instructional analysis
3. Search for existing materials and/or a crosswalk of existing curriculum materials to the competency profile
4. Development of the curriculum guide
5. Field-test of the curriculum guide
6. Development of mediated curriculum (videos)
7. Development of the test-item bank

To ensure that test items are firmly based on information available to students, development of the test-item bank is the final component in the development cycle.

These teachers contributed as writers and advisory committee members.

Junior Cagle, Poplar Bluff AVTS
Bill Daniel, Hannibal AVTS
Charles Dawson, Moberly AVTS
Don Marquardt, Hickman High School, Columbia
Coy Smith, Rolla AVTS
Charlie Walden, University of Missouri-Columbia

These CRTs were technically reviewed and/or field-tested by the following educators.

Charles Oviatt, educational consultant, Vienna, Mo.
Junior Cagle, Poplar Bluff AVTS
Bill Daniel, Hannibal AVTS
David Michael, Lex La-Ray Technical Center
James Shimel, Longview Community College
Coy Smith, Rolla AVTS

Support and contributions of IML staff members were instrumental to this project's development.

Harley Schlichting, director
Amon Herd, associate director
Phyllis Miller and Dan Stapleton, assistant directors
Lori Holliday, word processor III

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6. Demonstrate effectiveness in oral and written communication
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Field	Contents	Field	Contents
1	Unique item number	5	Date (MMYY)
2	Duty area and task number (Mo. competency profile)	6	Learning domain (Cognitive, Affective, Psychomotor)
3	Letter of correct answer	7	Writer(s)/reviewer(s)
4	Source (author, year of publication)	8	Accompanying artwork (ART)

.....

1. | A1 | e | MTT | 0890 | C | C.D. |

When should safety glasses be worn in the machine shop?

a. When operating the drill press

b. When operating the lathe

c. When operating milling machine

d. When operating tool grinders

e. At all times

.....

2. | A1 | d | MTT | 0890 | C | C.D. |

What is the best way to get a machine operator's attention?

a. Tap the person on the shoulder.

b. Turn off the machine.

c. Shout in the person's ear.

d. Wait until the operator shuts off the machine.

.....

3. | A1 | a | MTT | 0890 | C | C.D. |

Why should an operator turn off a machine when he or she leaves?

a. Another person may be injured.

b. The tool might break.

c. The motor might overheat.

d. The machine might jam.

.....
4. | A2 | c | MTT | 0890 | C | C.D. |

Why should liquid spilled on the shop floor be cleaned up immediately?

a. Looks messy

b. May damage the floor

c. Someone may fall

d. Creates more janitorial work

.....
5. | A2 | a | MTT | 0890 | C | C.D. |

Other than safety shoes, what is the best foot protection that can be worn in the machine shop?

a. Ordinary leather shoes

b. Canvas sneakers

c. Rubber boots

d. Sandals

.....
6. | A2 | b | MTT | 0890 | C | C.D. |

What should NEVER be used to remove metal chips from the machine?

a. Shop cloth

b. Fingers

c. Brush

d. Stick

Field	Contents	Field	Contents
1	Unique item number	5	Date (MMYY)
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.....
7. | A3 | c | MTT | 0890 | C | C.D. |

How many hours must an apprentice work to become a machinist?

a. 2,000

b. 4,000

c. 8,000

d. 10,000

.....
8. | A3 | c | MTT | 0890 | C | C.D. |

What part of a machinist's record does an employer regard as most important?

a. Age

b. Location

c. Attendance

d. Work speed

.....
9. | A3 | b | MTT | 0890 | C | C.D. |

What ability describes an all-around machinist?

a. Operates one machine

b. Operates several machines

c. Sets up machine

d. Is a machinist helper

.....
10. | A4 | b | MTT | 0890 | C | C.D. |

When should guards be in place on a machine?

a. When in use

b. When the machine is plugged in

c. When instructor/supervisor is watching

d. During inspections

.....
11. | A4 | c | MTT | 0890 | C | C.D. |

What type of container should be used for oily shop towels?

a. Wood

b. Cardboard

c. Metal

d. Plastic

.....
12. | A4 | a | MTT | 0890 | C | C.D. |

When should the work area be inspected for safe working conditions?

a. Daily

b. Weekly

c. Monthly

d. Yearly

Field	Contents	Field	Contents
1	Unique item number	5	Date (MMYY)
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.....

1. | B1 | c | IML Mod. 2 | 0890 | C | B.D. |

What is the decimal equivalent of 11/16?

a. .5625

b. .6625

c. .6875

d. .7031

.....

2. | B1 | c | IML Mod. 2 | 0890 | C | B.D. |

What proper fraction is equivalent to .1875?

a. 1/8

b. 5/32

c. 3/16

d. 5/16

.....

3. | B1 | d | IML Mod. 2 | 0890 | C | B.D. |

How is a fraction changed to a decimal?

a. Use the dividing head.

b. Divide the bottom number by the top.

c. Divide the addendum by the dedendum.

d. Divide the top number by the bottom.

```
..........
4.   | B1 | b  | Repp SG#1    | 0890    | C  | C.S.    |
```

What is the decimal equivalent of 1/4?

a. .125

b. .250

c. .375

d. .4375

```
..........
5.   | B1 | c  | Repp SG#1    | 0890    | C  | C.S.    |
```

What is the decimal equivalent of 7/16?

a. .1875

b. .375

c. .4375

d. .500

```
..........
6.   | B1 | b  | Repp SG#1    | 0890    | C  | C.S.    |
```

What is the decimal equivalent of 3/16?

a. .0625

b. .1875

c. .250

d. .4375

Field	Contents	Field	Contents
1	Unique item number	5	Date (MMYY)
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.....
7. | B2 | b | Repp SG#1 | 0890 | C | C.S. |

What is the tap drill size for 1/4-20? (TDS = D - 1/N)

a. .1875 (3/16)

b. .2010 (#7)

c. .2570 (F)

d. .3125 (5/16)

.....
8. | B2 | a | Repp SG#1 | 0890 | C | C.S. |

What is the tap drill size for 5/16-18? (TDS = D - 1/N)

a. .257 (F drill)

b. .3125 (5/16")

c. .368 (U drill)

d. .465 (31/64")

.....
9. | B2 | d | Repp SG#1 | 0890 | C | C.S. |

What is the tap drill size for 9/16-12? (TDS = D - 1/N)

a. .201 (#7)

b. .312 (5/16")

c. .368 (U drill)

d. .484 (31/64")

.....
10. | B3 | c | Repp SG#1 | 0890 | C | C.S. |

What is the metric equivalent of 29/64" (.453)? (1" = 25.4 mm)

a. 8.334 mm

b. 9.922 mm

c. 11.509 mm

d. 15.478 mm

.....
11. | B3 | d | Repp SG#1 | 0890 | C | C.S. |

What is the metric equivalent of .1575"? (1" = 25.4 mm)

a. .70 mm

b. .82 mm

c. .99 mm

d. 4 mm

.....
12. | B3 | c | Repp SG#1 | 0890 | C | C.S. |

What is the decimal equivalent of 27 mm? (1" = 25.4 mm)

a. .750"

b. .875"

c. 1.063"

d. 1.156"

Field	Contents	Field	Contents
1	Unique item number	5	Date (MMYY)
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.....
13. | B4 | a | IML Mod. 1 | 0890 | C | C.S. |

With a sales tax rate of .06925, what is the total cost of a job in which materials and labor cost $345.77? (Use a calculator.)

a. $369.71

b. $369.97

c. $370.00

d. $371.20

.....
14. | B4 | b | IML Mod. 1 | 0890 | C | C.S. |

What is the area of a 1 x 9 x 10.5" steel block?

a. 92.5 square inches

b. 94.5 square inches

c. 104.5 square inches

d. 106 square inches

.....
15. | B4 | b | IML Mod. 1 | 0890 | C | C.S. |

What weight remains after 27.34 pounds is milled off of a 47.23 pound block of steel?

a. 18.90 pounds

b. 19.89 pounds

c. 20.10 pounds

d. 20.34 pounds

.....
16. | B5 | c | Repp SG#1 | 0890 | C | C.S. |

Cut seven pieces of 1" dia. stock 7 3/4" long. How much bar stock is used? (Allow 1/8" for cutoff.)

a. 54.25"

b. 54.5"

c. 55.125"

d. 56"

.....
17. | B5 | c | Repp SG#1 | 0890 | C | C.S. |

A job calls for 1n000 pieces 4 3/8" long. A scrap allotment of 5% is allowed. How much material is used?

a. 364.583 feet

b. 365 feet

c. 382.8125 feet

d. 390 feet

.....
18. | B5 | d | Repp SG#1 | 0890 | C | C.S. |

What amount of stock is required for five 3 3/4" pieces? (Use 1/8" for cut-off.)

a. 18.75"

b. 18.875"

c. 19"

d. 19.375"

Field	Contents	Field	Contents
1	Unique item number	5	Date (MMYY)
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.....
19. | B6 | c | Repp SG#1 | 0890 | C | C.S. |

The surface of a 3.5" block of steel is cut to give five steps of the same size. How tall is each step?

a. .5"

b. .6"

c. .7"

d. .8"

.....
20. | B6 | c | Repp SG#1 | 0890 | C | C.S. |

With a 2.000" dia. round stock, cut four steps. Each step is .1875 smaller in dia. than the last step. What is the smallest diameter?

a. 1.125"

b. 1.187"

c. 1.250"

d. 1.312"

.....
21. | B6 | c | Repp SG#1 | 0890 | C | C.S. |

On a 12" part with .030" per inch taper, what is the taper in 6"?

a. .015"

b. .060"

c. .180"

d. .360"

.....
22. | B7 | d | Oberg | 0890 | C | C.S. |

What is the surface speed on a 2" dia. workpiece turning at 375 rpm?

$$\text{sfpm} = \frac{\text{Pi x diameter (in.) x rpm}}{12}$$

a. 151

b. 176

c. 185

d. 196

.....
23. | B7 | a | Oberg | 0890 | C | C.S. |

What is the surface speed on a 2.375" dia. workpiece turning at 475 rpm?

$$\text{sfpm} = \frac{\text{Pi x diameter (in.) x rpm}}{12}$$

a. 295

b. 300

c. 305

d. 310

.....
24. | B7 | d | Oberg | 0890 | C | C.S. |

What is the surface speed on a 3.375" dia. workpiece turning at 118 rpm?

$$\text{sfpm} = \frac{\text{Pi x diameter (in.) x rpm}}{12}$$

a. 98.45

b. 100.35

c. 103.50

d. 104.26

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	Source (author, year of publication)	8	Accompanying artwork (ART)

.....
25. | B8 | c | Oberg | 0890 | C | C.S. |

At what rpm should a 1/4" drill run to drill steel at 80 sfpm?

a. 1200

b. 1250

c. 1280

d. 1300

.....
26. | B8 | b | Oberg | 0890 | C | C.S. |

At what rpm should a 7/8" drill run to drill steel at 45 sfpm?

a. 200

b. 206

c. 226

d. 256

27. | B8 | b | Oberg | 0890 | C | C.S. |

At what rpm should a 1 1/4" drill run to drill steel at 80 sfpm?

a. 125

b. 256

c. 475

d. 800

.....
28. | B9 | d | Oberg | 0890 | C | C.S. |

What is the taper per foot on a 1" dia. workpiece, 6" long, turned on a taper 1" in dia. down to .5" dia.?

a. .50"

b. .75"

c. .875"

d. 1.00"

.....
29. | B9 | d | Oberg | 0890 | C | C.S. |

What is the taper per foot on a 2" dia. workpiece, 6" long, turned on a taper from 2" dia. down to a 1.5" dia.?

a. .50"

b. .75"

c. .875"

d. 1.00"

.....
30. | B9 | c | Oberg | 0890 | C | C.S. |

What is the taper per foot on a 1.125" piece, 5.5" long, turned on a taper from 1.125" down to .5"?

a. 1.00"

b. 1.25"

c. 1.36"

d. 1.60"

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.....

31. | B10 | a | Oberg | 0890 | C | C.S. |

What is the gage block set-up for a 2.5" sine bar set at 12.5 degrees?

a. 0.5410

b. 0.7500

c. 1.0621

d. 1.0821

.....

32. | B10 | d | Oberg | 0890 | C | C.S. |

What is the gage block set-up for a 5" sine bar set at 27.5 degrees?

a. 1.0621

b. 1.0821

c. 1.4750

d. 2.3087

.....

33. | B10 | c | Oberg | 0890 | C | C.S. |

What is the gage block set-up for a 10" sine bar set at 10.234 degrees?

a. 1.2509

b. 1.5625

c. 1.7767

d. 1.8750

.....
34. | B11 | b | IML Mod. 1 | 0890 | C | C.S. |

How many full turns of the crank on a dividing head are needed to cut an eight-sided part?

a. 2

b. 5

c. 8

d. 10

.....
35. | B11 | c | IML Mod. 1 | 0890 | C | C.S. |

What angle is made by five full cranks on a dividing head?

a. 25 degrees

b. 35 degrees

c. 45 degrees

d. 60 degrees

.....
36. | B11 | d | IML Mod. 1 | 0890 | C | C.S. |

What angle is made by 10 full cranks on a dividing head?

a. 35 degrees

b. 45 degrees

c. 60 degrees

d. 90 degrees

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.....
37. | B12 | a | Oberg | 0890 | C | C.S. | ART

Using the trigonometry chart shown, what is the length of the side opposite if the hypotenuse is 2.3745" long and the angle is 27 degrees?

a. 1.078"

b. 1.088"

c. 1.099"

d. 1.109"

Angle	Sin	Cos	Tan
2	.03490	.99939	.03492
3	.05234	.99863	.05241
4	.06976	.99756	.06993
26	.43837	.89879	.48773
27	.45399	.89101	.50953
28	.46947	.88295	.53171
36	.58779	.80902	.72654
37	.60182	.79864	.75355
38	.61566	.78801	.78129

.....
38. | B12 | b | Oberg | 0890 | C | C.S. | ART

Using the trigonometry chart shown, what is the length of the side adjacent if the hypotenuse is .8975 long and the angle is 37 degrees?

a. .700"

b. .717"

c. .725"

d. .825"

Angle	Sin	Cos	Tan
2	.03490	.99939	.03492
3	.05234	.99863	.05241
4	.06976	.99756	.06993
26	.43837	.89879	.48773
27	.45399	.89101	.50953
28	.46947	.88295	.53171
36	.58779	.80902	.72654
37	.60182	.79864	.75355
38	.61566	.78801	.78129

.....
39. | B12 | c | IML Mod. 1 | 0890 | C | C.S. |

What is the angle between holes in a layout of 12 equally spaced holes on a bolt circle?

a. 10 degrees

b. 20 degrees

c. 30 degrees

d. 45 degrees

.....
40. | B12 | c | Oberg | 0890 | C | C.S. | ART

Using the trigonometry chart shown, what is the length of the hypotenuse if the side opposite is 1.2345" long and the angle is 3 degrees?

a. 2.359"

b. 12.359"

c. 23.589"

d. 24.589"

Angle	Sin	Cos	Tan
2	.03490	.99939	.03492
3	.05234	.99863	.05241
4	.06976	.99756	.06993
26	.43837	.89879	.48773
27	.45399	.89101	.50953
28	.46947	.88295	.53171
36	.58779	.80902	.72654
37	.60182	.79864	.75355
38	.61566	.78801	.78129

.....
41. | B13 | d | IML Mod. 1 | 0890 | C | C.S. |

What is the angle at the intersection of two lines that are perpendicular?

a. 25 degrees

b. 30 degrees

c. 45 degrees

d. 90 degrees

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.....
1. | C1 | a | IML Mod. 2 | 0890 | C | B.D. |

Before returning precision measuring tools to their proper storage, they should be lightly oiled and wiped with a soft cloth.

a. True

b. False

.....
2. | C1 | c | IML Mod. 2 | 0890 | C | B.D. |

Which oil should be used on joints or moving parts of precision tools?

a. Hypoid

b. 30 wt.

c. Light instrument

d. Water soluable

.....
3. | C1 | d | Olivo, 1987 | 0890 | C | B.D. |

What should be done before taking measurements with a precision measuring tool?

a. Check the workpiece for burrs and foreign particles.

b. Clean all contact surfaces.

c. Check the instrument for accuracy.

d. All of the above

.....
4. | C2 | e | IML Mod. 2 | 0890 | C | B.D. |

Which can be measured with a tape measure?

a. Long pieces of work

b. Hole depth

c. Diameters

d. Circumference of large work

e. All of the above

.....
5. | C2 | b | IML Mod. 2 | 0890 | C | B.D. |

A tape measure is a precision measuring tool.

a. True

b. False

.....
6. | C2 | a | IML Mod. 2 | 0890 | C | B.D. |

A tape measure can be marked in inches and metric.

a. True

b. False

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.....

7. | C3 | a | IML Mod. 2 | 0890 | C | B.D. |

What is the most commonly used steel rule in a machine shop?

a. 6" steel rule

b. Bench rule

c. Hook rule

d. Tape measure

.....

8. | C3 | a | IML Mod. 2 | 0890 | C | B.D. |

When using a steel rule, the most accurate way to measure is from a point other than the very end of the rule.

a. True

b. False

.....

9. | C3 | e | IML Mod. 2 | 0890 | C | B.D. |

A 6" steel rule can be used to do which of the following?

a. Measure hole depth

b. Set dividers

c. Rough measure stock to length

d. Measure diameters

e. All of the above

.....
10. | C4 | a | Repp | 0890 | C | B.D. |

A slide caliper rule can be used to take inside and outside measurements.

a. True

b. False

.....
11. | C4 | b | IML Mod. 2 | 0890 | C | B.D. |

A slide caliper rule is considered a precision measuring tool.

a. True

b. False

.....
12. | C4 | c | IML Mod. 2 | 0890 | C | B.D. |

Which is an IMPROPER use of the slide caliper rule?

a. Outside fractional measurements

b. Inside fractional measurements

c. Hole depth measurements

d. Rapid measurements

Field	Contents	Field	Contents
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.....
13. | C5 | e | Repp | 0890 | C | B.D. |

What is a proper function of a combination square?

a. Lay out 45-degree lines

b. Lay out 90-degree lines

c. Lay out lines parallel to an edge

d. Measure height and depth

e. All of the above

.....
14. | C5 | b | Repp | 0890 | C | B.D. |

The spirit level on a combination square is a precision level.

a. True

b. False

.....
15. | C5 | a | Olivo, 1987 | 0890 | C | B.D. |

The blade and square make up the parts of a combination square.

a. True

b. False

.....
16. | C6 | b | IML Mod. 2 | 0890 | C | B.D. |

Dividers are precision measuring tools.

a. True

b. False

.....
17. | C6 | c | Olivo, 1987 | 0890 | C | B.D. |

What tool should be used to lay out linear or circular hole spacing quickly?

a. Hermaphrodite calipers

b. Combination set

c. Dividers

d. Hole gage

.....
18. | C6 | d | McGraw-Hill | 0890 | C | B.D. |

Which instrument is best for layout of arcs and circles?

a. Combination set

b. Hole gage

c. Telescoping gage

d. Dividers

Field	Contents	Field	Contents
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.....
19. | C7 | a | Repp | 0890 | C | B.D. |

Hermaphrodite calipers can be used to lay out parallel lines, locate centers and measure work from an edge.

a. True

b. False

.....
20. | C7 | b | IML Mod. 2 | 0890 | C | B.D. |

Hermaphrodite calipers are precision layout tools.

a. True

b. False

.....
21. | C7 | c | IML Mod. 2 | 0890 | C | B.D. |

What caliper is compass-like and has one straight leg and one hooked leg?

a. Outside

b. Inside

c. Hermaphrodite

d. Divider

.....
22. | C8 | a | IML Mod. 2 | 0890 | C | B.D. |

Spring calipers can be used to transfer semi-precision measurements.

a. True

b. False

.....
23. | C8 | b | Repp | 0890 | C | B.D. |

When measuring work with spring calipers, the work can be moving.

a. True

b. False

.....
24. | C8 | a | IML Mod. 2 | 0890 | C | B.D. |

Measurements taken with spring calipers can be transferred to the steel rule.

a. True

b. False

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.....
25. | C9 | d | IML Mod. 2 | 0890 | C | B.D. |

Which calipers are used for the most accurate measurements?

a. Hermaphrodite

b. Inside

c. Outside

d. Vernier

.....
26. | C9 | c | Repp | 0890 | C | B.D. |

What is the accuracy of inside and outside measurements made with vernier calipers?

a. .0625"

b. .010"

c. .001"

d. .0001"

.....
27. | C9 | e | Repp | 0890 | C | B.D. |

Vernier scales are used on which of the following?

a. Depth gage

b. Height gage

c. Protractor

d. Caliper

e. All of the above

.....

28. | C10 | d | Repp | 0890 | C | B.D. |

Which scale is found on a depth gage?

a. Micrometer

b. Vernier

c. Fractional

d. All of the above

29. | C10 | a | IML Mod. 2 | 0890 | C | B.D. |

Depth gages are used to measure the depths of holes, grooves, shoulders and projections.

a. True

b. False

.....

30. | C10 | b | Repp | 0890 | C | B.D. |

How is the measuring range of a depth micrometer increased?

a. Installing a longer barrel and thimble

b. Installing interchangeable measuring rods

c. Putting a piece of bar stock in the hole

d. All of the above

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.....
31. | C11 | d | IML Mod. 2 | 0890 | C | B.D. |

What dimensions are used to graduate a micrometer?

a. Lines per inch

b. Inches per revolution

c. Degrees and minutes

d. Inch and metric

.....
32. | C11 | a | IML Mod. 2 | 0890 | C | B.D. |

Inside, outside and depth micrometers are read the same way.

a. True

b. False

.....
33. | C11 | b | IML Mod. 2 | 0890 | C | B.D. |

A micrometer is a semi-precision measuring instrument.

a. True

b. False

.....
34. | C12 | d | IML Mod. 2 | 0890 | C | B.D. |

What measurements can be made with a dial caliper?

a. Inside

b. Outside

c. Depth

d. All of the above

e. None of the above

.....
35. | C12 | b | McGraw-Hill | 0890 | C | B.D. |

A dial caliper is a semi-precision measuring tool.

a. True

b. False

.....
36. | C12 | a | Repp | 0890 | C | B.D. |

Dial calipers are faster and easier to read than vernier calipers.

a. True

b. False

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.....
37. | C13 | b | Repp | 0890 | C | B.D. |

A telescoping gage is a direct measuring tool.

a. True

b. False

.....
38. | C13 | a | Repp | 0890 | C | B.D. |

Telescoping gages are transferred to a micrometer for accurate measuring of holes from 5/16" to 6".

a. True

b. False

.....
39. | C13 | a | Repp | 0890 | C | B.D. |

Small-hole gages can measure holes or recesses from 3/8" to 1/2".

a. True

b. False

.....
40. | C14 | c | Repp | 0890 | C | B.D. |

What measurement is quickly made with a plug gage?

a. Thickness

b. Slot width

c. Hole diameter

d. Hole depth

.....
41. | C14 | c | IML Mod. 2 | 0890 | C | B.D. |

Which tool gives quick and accurate measurements of shafts in a production setting?

a. Vernier height gage

b. Steel rule

c. Ring gage

d. Gage blocks

.....
42. | C14 | a | Repp | 0890 | C | B.D. |

What plug or ring gages are used to accurately check maximum and minimum sizes?

a. Go and no-go gages

b. "Jo" blocks

c. Reference standards

d. Micrometer gages

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.....
43. | C15 | a | IML Mod. 2 | 0890 | C | B.D. |

A height gage is a precision measuring tool.

a. True

b. False

.....
44. | C15 | a | IML Mod. 2 | 0890 | C | B.D. |

A height gage is more accurate for layout than a surface gage.

a. True

b. False

.....
45. | C15 | a | Repp | 0890 | C | B.D. |

For inspection work, a dial indicator can be clamped to the movable jaw of a height gage.

a. True

b. False

.....

46.	C16	d	Repp	0890	C	B.D.

What material is used to make surface plates?

a. Granite

b. Cast iron

c. Heavy steel

d. All of the above

.....

47.	C16	c	Repp	0890	C	B.D.

Why should a surface plate never be hammered or struck?

a. Insufficient hardness

b. Causes it to ring

c. Affects its accuracy

d. Not an ANSI standard

.....

48.	C16	a	IML Mod. 2	0890	C	B.D.

Surface plates are used for accurate layout and inspection work.

a. True

b. False

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.....
49. | C17 | d | Repp | 0890 | C | B.D. |

What kind of surface is used to perform accurate layout and inspection?

a. Optical flat

b. Workbench top

c. Cast iron work table

d. Surface plate

.....
50. | C17 | a | Repp | 0890 | C | B.D. |

A surface plate can be used with a height gage to lay out lines parallel to the plate.

a. True

b. False

.....
51. | C17 | a | Repp | 0890 | C | B.D. |

Which tool holds work at 90 degrees to the surface plate for inspection and measurement?

a. Angle plate

b. Hold downs

c. Parallels

d. Precision vise

.....
52. | C18 | c | Repp | 0890 | C | B.D. |

Which instrument is always calibrated without using gage blocks?

a. Sine bar

b. Depth micrometer

c. 1" micrometer

d. Dial indicating height gage

.....
53. | C18 | d | Repp | 0890 | C | B.D. |

In which process are gage blocks stuck together?

a. Buildup

b. Wrenching

c. Magnetism

d. Wringing

.....
54. | C18 | a | Oberg | 0890 | C | B.D. |

The selection of gage blocks requires successive elimination of the right-hand figure of the desired dimension.

a. True

b. False

Field	Contents	Field	Contents
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.....

55. | C19 | d | Olivo, 1987 | 0890 | C | B.D. |

Which is NOT true when using a dial test indicator?

a. Circular runout of a rotating part can be measured.

b. Gage blocks are used to set the dial test indicator accurately.

c. A surface plate is used for checking height and parallelism.

d. Dial test indicators are accurate to 10 microns or .000004".

.....

56. | C19 | a | Repp | 0890 | C | B.D. |

Dial test indicators are used to check large quantities of nearly identical parts quickly.

a. True

b. False

.....

57. | C19 | d | IML Mod. 2 | 0890 | C | B.D. |

What is the function of a dial test indicator?

a. Inspect parallelism or flatness

b. Inspect angularity using a sine bar

c. Inspect circularity using a V-block

d. All of the above

.....
58. | C20 | a | IML Mod. 2 | 0890 | C | B.D. |

What does the three-wire method of checking threads determine?

a. Pitch diameter

b. Major diameter

c. Minor diameter

d. Undercut diameter

.....
59. | C20 | a | IML Mod. 2 | 0890 | C | B.D. |

To cut a particular class of fit external thread, it is necessary to check the pitch diameter with thread wires.

a. True

b. False

.....
60. | C20 | a | Oberg | 0890 | C | B.D. |

Cutting and wire-measuring accurate thread forms other than American standard or unified is possible using formulas found in the "Machinery's Handbook."

a. True

b. False

Field	Contents	Field	Contents
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.....
61. | C21 | a | IML Mod. 2 | 0890 | C | B.D. |

When using the sine bar for layout, inspection, or machining operations, what supports the bar vertically?

a. Gage blocks

b. Planer gage

c. Screw jack

d. Table of trigonometric functions

.....
62. | C21 | a | IML Mod. 2 | 0890 | C | B.D. |

The sine bar is like what part of a triangle?

a. Hypotenuse

b. Base

c. Leg

d. Isosceles

.....
63. | C21 | b | IML Mod. 2 | 0890 | C | B.D. |

The sine bar is a semi-precision measuring tool.

a. True

b. False

Field	Contents	Field	Contents
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.....

1. | D1 | c | IML Mod. 2 | 0890 | C | J.C. |

What form of communication is used worldwide in drafting?

a. Computer

b. Telephone

c. Symbols

d. FAX machine

.....

2. | D1 | d | IML Mod. 2 | 0890 | C | J.C. |

What is the meaning of a circled M on a blueprint?

a. Mated material condition

b. Most material condition

c. Matched material condition

d. Maximum material condition

.....

3. | D1 | a | IML Mod. 2 | 0890 | C | J.C. | ART

What is the drafting symbol for diameter?

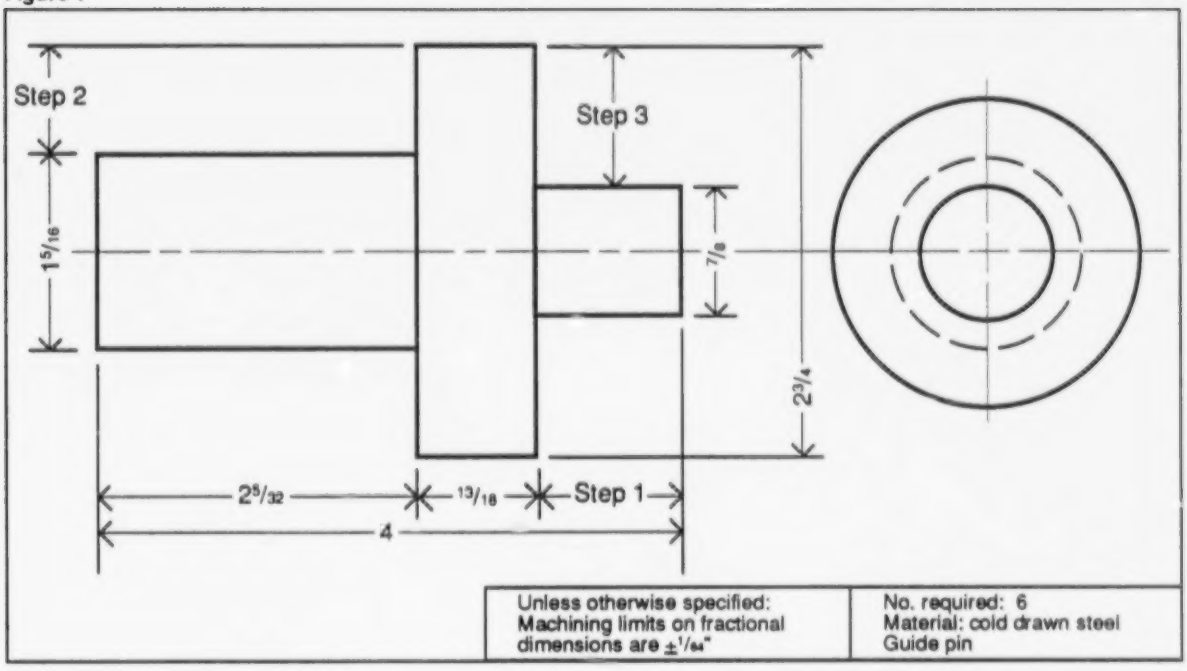
a. ⌀

b. Ⓓ

c. Ⓟ

d. Ⓜ

Figure 1


Step 2
Step 3
1 5/16
7/8
2 3/4
2 5/32
13/16
Step 1
4
Unless otherwise specified:
Machining limits on fractional dimensions are ±1/64"
No. required: 6
Material: cold drawn steel
Guide pin

Field	Contents	Field	Contents
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.....
4. | D2 | b | Basic BPR, p. 3 | 0890 | C | J.C. | ART

In Figure 1, what are the lines with arrows called?

a. Center

b. Dimension

c. Extension

d. Leader

.....
5. | D2 | a | Basic BPR, p. 3 | 0890 | C | J.C. |

What is the block of information in the lower right hand of a blueprint called?

a. Title block

b. Information block

c. Materials block

d. Blueprint coding block

.....
6. | D2 | c | Basic BPR, p. 3 | 0890 | C | J.C. |

Which lines show the size of an object?

a. Section lines

b. Projection lines

c. Dimension lines

d. Object lines

.....
7. | D3 | c | IML Mod. 2 | 0890 | C | J.C. |

What lines are drawn first in sketching a finished workpiece?

a. Border

b. Projection

c. Object

d. Dimension

.....
8. | D3 | b | IML Mod. 2 | 0890 | C | J.C. |

How many views are normally shown in a sketch of a cylindrical object with different diameters?

a. One

b. Two

c. Three

d. Four

.....
9. | D3 | b | IML Mod. 2 | 0890 | C | J.C. |

How many views are normally used when sketching a rectangular object?

a. One

b. Three

c. Four

d. Five

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.....
10. | D4 | b | IML Mod. 2 | 0890 | C | J.C. |

How much material should be left on the workpiece before heat treatment for final grinding?

a. .005

b. .010

c. .050

d. .100

.....
11. | D4 | b | IML Mod. 2 | 0890 | C | J.C. |

What is the tolerance on a part dimensioned 1.250 +/-.002?

a. .002

b. .004

c. 1.248

d. 1.250

.....
12. | D4 | c | IML Mod. 2 | 0890 | C | J.C. |

What controls the shape, feature, and deviation of a part?

a. Allowance

b. Hardness

c. Tolerance

d. Toughness

.....
13. | D5 | d | Basic BPR, p. 3 | 0890 | C | J.C. | ART

Using Figure 1, calculate the missing dimension of step 1.

a. 3/8"

b. 1/2"

c. 5/8"

d. 1 1/32"

.....
14. | D5 | b | Basic BPR | 0890 | C | J.C. | ART

Using Figure 1, calculate the missing dimension of step 2.

a. .625

b. .7187

c. .750

d. .875

.....
15. | D5 | d | Basic BPR | 0890 | C | J.C. | ART

Calculate the missing dimension of step 3 in Figure 1.

a. .375

b. .4375

c. .875

d. .9375

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.....
16. | D6 | c | ANSI Y14.5M | 0890 | C | B.D. |

What type of drawing leaves no doubt as to the intended definition of the specific part requirements?

a. Johansson tolerancing

b. Differential indexing

c. Geometric tolerancing and dimensioning

d. Conventional tolerancing

.....
17. | D6 | d | ANSI Y14.5M | 0890 | C | B.D. |

Which describes the origin from which the location of geometric characteristics of features of a part are established?

a. American National Standards Institute

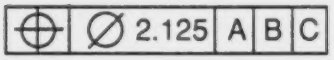
b. Reference point

c. Virtual condition

d. Datum

.....
18. | D6 | c | ANSI Y14.5M | 0890 | C | B.D. | ART

What do the A, B, and C refer to in the feature control frame below?



a. Diameter of the hole

b. Coaxial alignment of parallel terms

c. Primary, secondary, and tertiary datums

d. Tolerance of the allowable diameter

.....
19. | D7 | a | Oberg | 0890 | C | B.D. |

Which is the most common standard reference anywhere mechanical products are designed or manufactured?

a. Machinery's Handbook

b. National Tool and Die Association

c. American National Screw Thread Standard

d. S.A.E. Standard

.....
20. | D7 | a | Oberg | 0890 | C | B.D. |

Which might NOT be found in the Machinery's Handbook?

a. Statistical process control

b. Thread fits

c. Trigonometric functions

d. Weights and properties of metals

.....
21. | D7 | a | Oberg | 0890 | C | B.D. |

What book would be used to find addendum and dedendum on an involute gear tooth form?

a. Machinery's Handbook

b. Student text

c. IML Machine Shop Curriculum

d. Vocational Administrative Management System

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.....
22. | D8 | d | IML Mod. 2 | 0890 | C | B.D. |

On what is part layout based?

a. Layout fluid

b. Carbon or transfer paper

c. Machine design

d. Blueprint information

.....
23. | D8 | a | IML Mod. 2 | 0890 | C | B.D. |

What purpose does layout serve for complex parts?

a. Verification of location during the machining process

b. Elimination of need to measure

c. Protection of the part surface from abrasion

d. Prevention of rust on non-machine surfaces

.....
24. | D8 | b | IML Mod. 2 | 0890 | C | B.D. |

Which is necessary for part layout?

a. Tolerances for dimensions

b. Semi-precision scribed points, lines, or circles

c. Thread pitch and classification

d. Highly polished surface

.....
25. | D9 | a | IML Mod. 2 | 0890 | C | B.D. |

What is needed to plan the steps in a machining procedure?

a. Blueprint

b. Stock cutting and layout plan

c. Necessary tooling

d. Precision measuring tools

.....
26. | D9 | d | IML Mod. 2 | 0890 | C | B.D. |

What does a blueprint specify?

a. Tolerances

b. Surface finish

c. Material

d. All of the above

.....
27. | D9 | a | IML Mod. 2 | 0890 | C | B.D. |

The size and shape of a part dictates machining sequence.

a. True

b. False

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.....

1.	E1	c	McKnight	0890	C	D.M.

To what angle is a dull cold chisel best sharpened?

a. 20 degrees

b. 45 degrees

c. 60 degrees

d. 90 degrees

.....

2.	E1	c	McGraw-Hill	0890	C	D.M.

Which hammer best moves a tight-fitting steel part without marring its surface?

a. Toolmaker's

b. Machinist's

c. Lead

d. Sledge

.....
3. | E2 | b | McGraw-Hill | 0890 | C | D.M. |

When hacksawing metal by hand, how many strokes per minute should be averaged?

a. 10-30

b. 40-60

c. 70-90

d. 100-120

.....
4. | E2 | b | McKnight | 0890 | C | D.M. |

If a 1/2" soft iron rod is cut by hand, how many teeth per inch should the hacksaw selected have for most efficient cutting?

a. 14

b. 18

c. 24

d. 32

.....
5. | E2 | a | McKnight | 0890 | C | D.M. |

When sawing by hand, on which stroke should pressure be applied?

a. Forward only

b. Backward only

c. Forward and backward equally

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.....
6. | E3 | c | McGraw-Hill | 0890 | C | D.M. |

Which file tooth removes waste material rapidly?

a. Smooth

b. Second cut

c. Bastard

d. Dead smooth

.....
7. | E3 | b | McKnight | 0890 | C | D.M. |

Which file would best shape an internal square corner without removing metal from the intersecting edge?

a. Half round

b. Pillar

c. Square

d. Three-square

.....
8. | E3 | a | McGraw-Hill | 0890 | C | D.M. |

What is the best method of cleaning a clogged machine file?

a. Brushing with a file card

b. Hitting it on a vise or piece of metal

c. Rubbing it with chalk

d. Soaking it in mineral spirits

.....
9. | E4 | d | McGraw-Hill | 0890 | C | D.M. |

A center punch ground to what angle would be appropriate for guiding a drill bit center?

a. 20 degrees

b. 45 degrees

c. 60 degrees

d. 90 degrees

.....
10. | E4 | d | McKnight | 0890 | C | D.M. |

When making precise layouts, which punch is most accurate?

a. Center

b. Drift

c. Pin

d. Prick

.....
11. | E4 | b | McKnight | 0890 | C | D.M. |

If the head of a chisel or punch develops a mushroom shape, it should be forged back to the original shape.

a. True

b. False

64

Field	Contents	Field	Contents
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.....
12. | E5 | b | IML Mod. 3 | 0890 | C | D.M. |

Which tool most accurately positions the location of threaded holes from one part to another?

a. Transfer punch

b. Transfer screw

c. Center punch

d. Prick punch

.....
13. | E5 | d | McKnight | 0890 | C | D.M. |

Which punch is best when transferring the location of holes from one part to another?

a. Center

b. Pin

c. Drift

d. Transfer

.....
14. | E5 | a | IML Mod. 3 | 0890 | C | D.M. |

Transfer screws are used to transfer threaded hole locations to another part.

a. True

b. False

.....
15. | E6 | d | McGraw-Hill | 0890 | C | D.M. |

Which type of threading die has the most possible adjustments?

a. Adjustable and removable screw plate die

b. Adjustable and removable solid hex die

c. Solid die

d. Adjustable split die

.....
16. | E6 | c | McKnight | 0890 | C | D.M. |

When rechasing threads, how often should the diestock be reversed (about 1/2 turn) to prevent chips from roughing threads?

a. Every turn

b. Every 10-12 threads

c. Every 2-3 threads

d. Backing up is not needed.

.....
17. | E6 | b | McKnight | 0890 | C | D.M. |

When threading to a shoulder, the entire threading operation should be performed with the tapered threads on the die mounted away from the workpiece.

a. True

b. False

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.....
18. | E7 | a | McGraw-Hill | 0890 | C | D.M. |

If threads are specified to the end of a blind hole, what style of tap should be used?

a. Bottoming

b. Plug

c. Taper

d. Universal

.....
19. | E7 | c | McGraw-Hill | 0890 | C | D.M. |

What lubricant should NOT be used to tap a hole in brass?

a. Soluble oil

b. Kerosene

c. Soda water

d. Mineral oil

.....
20. | E7 | b | McGraw-Hill | 0890 | C | D.M. |

The tap drill for a 1/4-20 NC taper tap should be 1/4" diameter.

a. True

b. False

.....
21. | E8 | c | McKnight | 0890 | C | D.M. |

In hand reaming, what is the maximum amount of material that should be removed by one reamer?

a. 0.00005"

b. 0.0005"

c. 0.005"

d. 0.05"

.....
22. | E8 | a | McKnight | 0890 | C | D.M. |

When hand reaming, which direction should the reamer be turned to enter and leave the hole?

a. Clockwise, both in and out

b. Counterclockwise in and out

c. Clockwise in and counterclockwise out

d. Either direction either time

.....
23. | E8 | a | McGraw-Hill | 0890 | C | D.M. |

When reaming a hole containing a keyway, the reamer should have helical flutes.

a. True

b. False

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.....
24. | E9 | d | McKnight | 0890 | C | D.M. |

What is the best dressing tool to true bench grinder wheels?

a. Abrasive stick

b. Huntington

c. Abrasive wheel

d. Diamond

.....
25. | E9 | b | McKnight | 0890 | C | D.M. |

When dressing a bench grinder wheel, the tool should be held above the tool rest so it does not become caught.

a. True

b. False

.....
26. | E9 | a | McKnight | 0890 | C | D.M. |

A Huntington dresser works well to recondition a loaded grinding wheel.

a. True

b. False

.....
27. | E10 | b | McKnight | 0890 | C | D.M. |

When sharpening chisels and drill bits on a standard bench grinder, it is usually best to use the side of the grinding wheel.

a. True

b. False

.....
28. | E10 | b | McKnight | 0890 | C | D.M. |

If a cutting tool turns blue during sharpening with a pedestal grinder, simply grinding off the blue color will correct the problem.

a. True

b. False

.....
29. | E10 | c | McKnight | 0890 | C | D.M. |

How should the cutting edge of a cold chisel be ground on a bench grinder to get the best shearing action?

a. Slightly concave

b. Flat

c. Slightly convex

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.....
30. | E11 | a | McKnight | 0890 | C | D.M. |

What is the most common artificial abrasive used in the majority of grinding wheels?

a. Aluminum oxide

b. Silicon carbide

c. Boron carbide

d. Crocus cloth

.....
31. | E11 | b | McKnight | 0890 | C | D.M. |

In the lapping process, the lap tool used must be of the same hardness as the material being lapped.

a. True

b. False

.....
32. | E11 | a | McKnight | 0890 | C | D.M. |

When polishing a rectangular steel surface, in which direction should the strokes be made to have the surface appear the brightest?

a. Parallel to the longest side

b. Parallel to the shortest side

c. Diagonal to the length of the rectangle

d. In a circular motion

.....
33. | E12 | a | IML Mod. 3 | 0890 | C | D.M. |

Which hand grinder is designed for heavy grinding?

a. Electric

b. Pneumatic

c. Hydraulic

.....
34. | E12 | a | IML Mod. 3 | 0890 | C | D.M. |

A major concern when using a hand grinder is to avoid slipping and touching the grinder to an adjacent finished surface.

a. True

b. False

.....
35. | E12 | a | IML Mod. 3 | 0890 | C | D.M. |

Which is the BEST application for a hand grinder?

a. Deburring castings

b. Producing truly flat surfaces

c. Producing an accurate convex curve

d. Removing large amounts of waste stock quickly

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.....

36.	E13	a	McKnight	0890	C	D.M.	

When removing a broken bolt with a screw extractor made with spiral flutes, in which direction should the extractor be turned?

a. Counterclockwise

b. Clockwise

c. Does not matter

.....

37.	E13	b	McKnight	0890	C	D.M.	

What size hole should be drilled in a broken bolt to utilize a screw extractor?

a. Equal to the shank diameter of the extractor

b. Smaller than the minor thread diameter

c. Equal to the minor thread diameter

d. Larger than the minor thread diameter

.....

38.	E13	a	McKnight	0890	C	D.M.	

Which chisel is best for removing a broken bolt?

a. Diamond-point

b. Flat

c. Cape

d. Round-nose

.....
39. | E14 | b | McKnight | 0890 | C | D.M. |

To remove a broken high-speed steel threading tap, drill its center out and use a screw extractor.

a. True

b. False

.....
40. | E14 | d | McKnight | 0890 | C | D.M. |

Which is best for removing a broken threading tap?

a. Flat chisel

b. Center punch

c. Prick punch

d. Carbide end mill

.....
41. | E14 | b | McKnight | 0890 | C | D.M. |

Which machine is most often used to remove a broken threading tap if a tap extractor does not work?

a. Arbor press

b. Electrical discharge machine

c. Milling machine

d. MIG welder

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.....

42. | E15 | a | Feirer | 0890 | C | D.M. |

A dowel pin is usually chamfered on one end to help guide it into the hole.

a. True

b. False

.....

43. | E15 | b | Feirer | 0890 | C | D.M. |

When selecting a dowel pin to align parts, its diameter should be 0.05" larger than the holes to ensure accuracy.

a. True

b. False

.....

44. | E15 | a | Feirer | 0890 | C | D.M. |

Dowel pins are often used to temporarily assemble parts when checking for acceptable fit.

a. True

b. False

.....
45. | E16 | d | McKnight | 0890 | C | D.M. |

Of what material are thread inserts to repair holes having damaged threads usually made?

a. Aluminum

b. Brass

c. Magnesium

d. Steel

.....
46. | E16 | b | IML Mod. 3 | 0890 | C | D.M. |

Which is commonly used to install a helical coil thread insert?

a. Diestock

b. Tap handle

c. Locking pliers

d. Screw extractor

.....
47. | E16 | a | IML Mod. 3 | 0890 | C | D.M. |

When installing a helical coil thread insert in a damaged hole, special care should be taken to center the drill bit in the original hole, or the new threads may not be in the desired location.

a. True

b. False

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.....

48. | E17 | b | IML Mod. 3 | 0890 | C | D.M. |

When straightening stock with the arbor press, the high point should be placed on the plates facing down.

a. True

b. False

.....

49. | E17 | b | IML Mod. 3 | 0890 | C | D.M. |

Since all materials have the same amount of springback, the arbor press should deflect them equally past their desired ending position.

a. True

b. False

.....

50. | E17 | d | IML Mod. 3 | 0890 | C | D.M. |

On what part of the arbor press should a bent piece be placed?

a. Ram

b. Quill

c. Arbor

d. Platen

.....
51. | E18 | a | McKnight | 0890 | C | D.M. |

An arbor press is often used to mount a gear or pulley on a shaft using a force fit.

a. True

b. False

.....
52. | E18 | a | IML Mod. 3 | 0890 | C | D.M. |

A common feature found on the hydraulic jack press, but not on the arbor press, is a pressure gage.

a. True

b. False

.....
53. | E18 | b | IML Mod. 3 | 0890 | C | D.M. |

When pressing a new bearing on a shaft, the shaft should NOT be lubricated so the fit will be tighter.

a. True

b. False

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.....

54. | E19 | d | McKnight | 0890 | C | D.M. |

Which job would best be done by the broaching process?

a. Removing broken taps

b. Removing broken stud bolts

c. Fastening precision pieces together

d. Cutting keyways

.....

55. | E19 | a | Feirer | 0890 | C | D.M. |

When broaching at the bench, the broach and bushing are often operated by the arbor press.

a. True

b. False

.....

56. | E19 | a | Feirer | 0890 | C | D.M. |

When broaching in bronze, no lubricant is needed.

a. True

b. False

.....
57. | E20 | a | McKnight | 0890 | C | D.M. |

What is the small, semicircular piece used to assemble a pulley on a shaft?

a. Woodruff key

b. Oval undercut key

c. Gib-head key

d. Fillister key

.....
58. | E20 | c | McKnight | 0890 | C | D.M. |

What is the best punch to select when moving holes in an assembly into alignment?

a. Center

b. Pin

c. Drift

d. Prick

.....
59. | E20 | b | McKnight | 0890 | C | D.M. |

What type of wrench is best used to assemble nuts to a specific tightness?

a. Allen

b. Torque

c. Spanner

d. Socket

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.....
1. | F1 | a | McKnight | 0890 | C | D.M. |

Spark testing of steel on the grinding wheel can provide an estimate of its carbon content.

a. True

b. False

.....
2. | F1 | d | McKnight | 0890 | C | D.M. |

What do the first two digits on an AISI (American Iron and Steel Institute) designation of steel indicate?

a. Amount of carbon content

b. Whether metal is ferrous or non-ferrous

c. Hardness designation

d. Basic alloy group

.....
3. | F1 | b | McKnight | 0890 | C | D.M. |

Spark testing on a grinding wheel quickly distinguishes aluminum from brass.

a. True

b. False

.....

4.	F2	b	Feirer	0890	C	D.M.

Which would machine most easily?

a. SAE/AISI 1112 rated at 100 percent

b. SAE/AISI 1113 rated at 135 percent

c. SAE/AISI 1115 rated at 81 percent

d. SAE/AISI 1120 rated at 78 percent

.....

5.	F2	a	McKnight	0890	C	D.M.

Lead is sometimes added to carbon steel to improve its machinability.

a. True

b. False

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.....

6. | F3 | d | McKnight | 0890 | C | D.M. |

What is added to iron and nickel to make stainless steel?

a. Molybdenum

b. Tungsten

c. Vanadium

d. Chromium

.....

7. | F3 | a | McKnight | 0890 | C | D.M. |

Which type of iron contains the least carbon?

a. Wrought

b. Low-carbon

c. Cast

d. Grey

.....

8. | F3 | a | McKnight | 0890 | C | D.M. |

Which metal has the lowest melting point?

a. Aluminum

b. Brass

c. Copper

d. Steel

.....
9. | F4 | c | Feirer | 0890 | C | D.M. |

What type of metal is best machined with a two-degree back and side rake?

a. Copper

b. Medium-carbon steel

c. Brass

d. Aluminum

.....
10. | F4 | b | Feirer | 0890 | C | D.M. |

A general rule of thumb is that the harder the material to be machined, the sharper the cutting edge should be.

a. True

b. False

.....
11. | F4 | a | Feirer | 0890 | C | D.M. |

Carbide-tipped cutting tools can usually cut much faster than high-speed steel tools.

a. True

b. False

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.....
12. | F5 | a | McKnight | 0890 | C | D.M. |

What is the best quenching material for heat treatment of W-1 steel?

a. Brine

b. Kerosene

c. Air

d. Sand

.....
13. | F5 | b | McKnight | 0890 | C | D.M. |

Hardness and toughness of a metal are directly related to each other, and both increase with tempering.

a. True

b. False

.....
14. | F5 | a | McKnight | 0890 | C | D.M. |

Which heat treatment process will produce the maximum softness in steel?

a. Full annealing

b. Normalizing

c. Carburizing

d. Tempering

.....
15. | F6 | b | McKnight | 0890 | C | D.M. |

The spark test on a grinder is a good way of determining relative hardness between samples of the same grade of steel.

a. True

b. False

.....
16. | F6 | a | McKnight | 0890 | C | D.M. |

If a file test for hardness barely makes a mark, the metal's Rockwell C hardness number would be 50 or higher.

a. True

b. False

.....
17. | F6 | a | McKnight | 0890 | C | D.M. |

Which would best be used to conduct a non-marring hardness test on steel?

a. Shore scleroscope

b. File

c. Ultrasonic inspection

d. Eddy current inspection

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.....

1. | G1 | c | MTT | 0890 | C | C.D. |

To increase visibility of material extending into a walkway, what should be placed on its end?

a. Chair

b. Bucket

c. Red cloth

d. Adjustable wrench

.....

2. | G1 | c | MTT | 0890 | C | C.D. |

Where should the operator stand when starting an abrasive saw?

a. Front of saw

b. Back of saw

c. Out of line of saw

d. Behind a door

.....

3. | G1 | b | MTT | 0890 | C | C.D. |

What should be used to remove metal chips from the saw blade?

a. Hand

b. Brush

c. Shop towel

d. Metal rod

.....
4. | G2 | a | MTT | 0890 | C | C.D. |

What type of oil should be used on moving parts of a cut-off saw?

a. Lubricating

b. Cutting

c. Soluble

d. Threading

.....
5. | G2 | d | Rutland | 0890 | C | C.D. |

How often should a cut-off saw be cleaned and oiled?

a. Daily

b. Weekly

c. Monthly

d. According to manufacturer's specifications

.....
6. | G2 | b | Rutland | 0890 | C | C.D. |

How often should the blade tension of a vertical band saw be checked?

a. After each use

b. Before each use

c. Weekly

d. Yearly

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.....
7. | G3 | b | MTT | 0890 | C | C.D. |

Which type of material requires the finest saw teeth?

a. Copper

b. Steel

c. Aluminum

d. Plastic

.....
8. | G3 | c | MTT | 0890 | C | C.D. |

What material is used to make most power hacksaw blades?

a. Carbon steel

b. Diamond impregnated

c. High-speed steel

d. Carbide insert

.....
9. | G3 | d | MTT | 0890 | C | C.D. |

What type of saw wastes the least material when making a cut?

a. Cold saw

b. Power hacksaw

c. Abrasive

d. Band saw

.....
10. | G4 | a | MTT | 0890 | C | C.D. |

How should the ends of a band saw blade be cut before they are welded?

a. 90 degrees

b. 45 degrees

c. 30 degrees

d. 15 degrees

.....
11. | G4 | a | MTT | 0890 | C | C.D. |

It is necessary to anneal a saw blade after it has been welded.

a. True

b. False

.....
12. | G4 | b | MTT | 0890 | C | C.D. |

When welding a saw blade, how is the power shut off after the weld is made?

a. Timer

b. Automatically

c. Remote

d. By hand

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.....
13. | G5 | b | MTT | 0890 | C | C.D. |

When charts are not available, how are speeds for sawing selected?

a. Experiment

b. See instructor

c. Use high speed

d. Use low speed

.....
14. | G5 | c | MTT | 0890 | C | C.D. |

What blade speed is used in friction sawing?

a. 30-150 fpm

b. 300-1,500 fpm

c. 3,000-15,000 fpm

d. 30,000-150,000 fpm

.....
15. | G6 | c | MTT | 0890 | C | C.D. |

In what direction does a power hacksaw move?

a. Rotary

b. Continuous

c. Reciprocating

.....
16. | G6 | c | MTT | 0890 | C | C.D. |

What measuring device is used to measure a 10' length of bar stock cut be a power hacksaw?

a. 6" scale

b. 12" rule

c. Tape measure

d. Combination square

.....
17. | G6 | b | MTT | 0890 | C | C.D. |

What is used to check the squareness of the end of a part cut with a power hacksaw?

a. Carpenter square

b. Combination square

c. Angle binder

d. Eyeball

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.....
18. | G7 | a | MTT | 0890 | C | C.D. |

What is the motion of a horizontal band saw blade?

a. Continuous

b. Reciprocating

c. Vertical

d. Up and down

.....
19. | G7 | c | MTT | 0890 | C | C.D. |

In what direction should the teeth on a band saw blade point?

a. Does not matter

b. Away from the workpiece

c. Toward the workpiece

d. Upward

.....
20. | G7 | c | MTT | 0890 | C | C.D. |

When cutting one part on the band saw, how is the feed accomplished?

a. Hydraulic cylinder

b. Springs

c. By hand

d. Power

.....
21. | G8 | d | MTT | 0890 | C | C.D. |

Why is a coolant used with a cut-off saw?

a. Blade lasts longer

b. Produces good finish

c. Keeps part cool

d. All of the above

.....
22. | G8 | b | MTT | 0890 | C | C.D. |

What type of coolant is used on a cut-off saw?

a. Spindle

b. Soluble

c. Gear oil

d. Motor oil

.....
23. | G8 | a | Experience | 0890 | C | C.D. |

When sawing aluminum with a power saw, what coolant is used?

a. None

b. Lard

c. Kerosene

d. Soluble

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.....
24. | G9 | b | MTT | 0890 | C | C.D. |

When sawing external sharp corners, what width of saw blade is best suited?

a. Wide

b. Narrow

c. Thick

d. Coarse

.....
25. | G9 | a | MTT | 0890 | C | C.D. |

When contour sawing a very sharp curve, it may be advisable to bypass it temporarily.

a. True

b. False

.....
26. | G9 | d | MTT | 0890 | C | C.D. |

What should be done at the end of a saw cut?

a. Stop the machine.

b. Remove the workpiece.

c. Clean the machine.

d. All of the above

.....
27. | G10 | d | MTT | 0890 | C | C.D. |

When internal contour sawing, what size hole is drilled through the part when a 1/4" saw blade is used?

a. 1/16"

b. 1/8"

c. 3/16"

d. 5/16"

.....
28. | G10 | d | MTT | 0890 | C | C.D. |

When the enclosure is rectangular, how many pilot holes are drilled for sawing?

a. 1

b. 2

c. 3

d. 4

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.....

1. | H1 | c | MTT | 0890 | C | C.D. |

What should always be worn when operating a drill press?

a. Rings

b. Loose clothing

c. Safety glasses

d. Gloves

.....

2. | H1 | a | MTT | 0890 | C | C.D. |

What should be used to remove chips from the drill press table?

a. Brush

b. Air hose

c. Hands

d. Broom

.....

3. | H1 | c | MTT | 0890 | C | C.D. |

What should be done before servicing a drill press?

a. Run at high speed

b. Run at low speed

c. Turn off machine

d. Remove spindle

.....
4. | H2 | d | mfr. specifications | 0890 | C | C.D. |

What part of a drill press should be lubricated daily?

a. Belt

b. Handle

c. Table

d. Quill

.....
5. | H2 | b | mfr. specifications | 0890 | C | C.D. |

When the belt slips on a sensitive drill press, what can be applied to stop slippage?

a. Oil

b. Belt dressing

c. Silicon lubricant

d. Cutting oil

.....
6. | H2 | b | MTT | 0890 | C | C.D. |

When a drill press is NOT in use, what should be rubbed on the table?

a. Wet rag

b. Spindle oil

c. Paper towel

d. Soluble oil

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.....
7. | H3 | c | MTT | 0890 | C | C.D. |

What work-holding device is most commonly used on the sensitive drill press?

a. Angle plate

b. Straps

c. Vise

d. Jack screws

.....
8. | H3 | a | MTT | 0890 | C | C.D. |

What should be used when drilling round stock on the drill press?

a. V-blocks

b. Step blocks

c. Shims

d. T-bolts

.....
9. | H3 | c | MTT | 0890 | C | C.D. |

What is the most common tool used to clamp a flat piece of material to the drill press table?

a. Vise

b. Parallels

c. C-clamp

d. Drill jig

.....
10. | H4 | d | MTT | 0890 | C | C.D. |

What type of drill is used to drill cast iron or cast steel?

a. High helix drill

b. Subland drill

c. Spade bit

d. Carbide tip

.....
11. | H4 | a | MTT | 0890 | C | C.D. |

What are three-fluted core drills used for?

a. Enlarging cored holes

b. Drilling small holes

c. Drilling large holes

d. Reaming

.....
12. | H4 | a | MTT | 0890 | C | C.D. |

Oil-hole drills are used on high-production screw machines.

a. True

b. False

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.....
13. | H5 | a | MTT | 0890 | C | C.D. |

What determines the angle of the cutting edge on a drill bit?

a. Type of material

b. Type of drill press

c. Depth of hole

.....
14. | H5 | c | MTT | 0890 | C | C.D. |

What is the correct included lip angle for general-purpose drilling of steels?

a. 12 degrees

b. 90 degrees

c. 118 degrees

d. 130 degrees

.....
15. | H5 | b | MTT | 0890 | C | C.D. |

What material is drilled with a standard 118-degree point drill?

a. Cast iron and steel

b. Steel

c. Aluminum

d. Brass and bronze

.....
16. | H6 | b | MTT | 0890 | C | C.D. |

What is the optimal cutting speed of a high-speed drill when drilling brass?

a. 50 sfpm

b. 100 sfpm

c. 200 sfpm

d. 300 sfpm

.....
17. | H6 | b | MTT | 0890 | C | C.D. |

What is the optimal feed rate for high-speed steel drills when drilling a 1/2" diameter hole?

a. .001

b. .007

c. .030

d. .040

.....
18. | H6 | b | MTT | 0890 | C | C.D. |

To change speeds on a variable speed drill press, the drill press is always turned off.

a. True

b. False

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.....
19. | H7 | d | MTT | 0890 | C | C.D. |

When drilling cast iron, what type of coolant is used?

a. 30 weight

b. Spindle

c. White lead

d. None

.....
20. | H7 | d | MTT | 0890 | C | C.D. |

What is used to apply cutting oil to a drill bit?

a. Grease gun

b. Hand broom

c. Shop towel

d. 1" brush

.....
21. | H7 | c | MTT | 0890 | C | C.D. |

Why is cutting fluid applied to a drill bit?

a. Hardening a part

b. Avoiding a mess

c. Cooling and lubricating

d. Keeping drills clean

.....
22. | H8 | e | MTT | 0890 | C | C.D. |

What is NOT done when drilling a hole with a drill press?

a. Lubricate drill press.

b. Select proper drill bit size.

c. Turn on drill press.

d. Select speed.

e. Turn tailstock handwheel.

.....
23. | H8 | c | MTT | 0890 | C | C.D. |

What type of hole is drilled first when a large diameter hole is needed?

a. Square

b. Reamed

c. Pilot

d. Cored

.....
24. | H8 | b | MTT | 0890 | C | C.D. |

What should be done just before the drill bit breaks through the part?

a. Apply more pressure

b. Apply less pressure

c. Slow rpm

d. Increase rpm

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.....

25. | H9 | a | MTT | 0890 | C | C.D. |

What is one advantage of power feed on a drill press?

a. Less effort needed

b. Faster drilling

c. Slower drilling

d. Uses smaller drill bits

.....

26. | H9 | c | MTT | 0890 | C | C.D. |

What type of drill press is NOT equipped with power feed?

a. Multiple drill head

b. Radial

c. Sensitive

d. Gang

.....

27. | H9 | d | MTT | 0890 | C | C.D. |

How is the feed rate changed on the automatic feed drill press?

a. Belt

b. Variable pulleys

c. Worn gears

d. Gear levers

.....
28. | H10 | a | MTT | 0890 | C | C.D. |

What tool is used to form an angular recess for a flat-head screw?

a. Countersink

b. Tapered reamer

c. Undercutting tool

d. Counterbore

.....
29. | H10 | b | MTT | 0890 | C | C.D. |

What are the two most commonly used angles on countersinks?

a. 20 and 32 degrees

b. 60 and 82 degrees

c. 100 and 112 degrees

d. 110 and 122 degrees

.....
30. | H10 | a | MTT | 0890 | C | C.D. |

When countersinking, use approximately one-fourth the rpm used for drilling the same material.

a. True

b. False

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.....

31. | H11 | d | MTT | 0890 | C | C.D. |

What tool is used to recess a surface for a cap-head screw?

a. Countersink

b. Reamer

c. Undercutting tool

d. Counterbore

.....

32. | H11 | b | MTT | 0890 | C | C.D. |

Which is NOT part of a counterbore?

a. Shank

b. Slot

c. Head

d. Pilot

.....

33. | H11 | d | MTT | 0890 | C | C.D. |

Ordinarily, how much smaller should the pilot hole be drilled for counterboring?

a. .050

b. .030

c. .020

d. .002

.....
34. | H12 | d | MTT | 0890 | C | C.D. |

What type of tool can be used for spotfacing?

a. Countersink

b. Spotter

c. Drill

d. Counterbore

.....
35. | H12 | d | MTT | 0890 | C | C.D. |

What operation is performed on a part when the head of a cap screw is to rest on a rough surface?

a. Countersink

b. Undercut

c. Counterbore

d. Spotface

.....
36. | H12 | a | MTT | 0890 | C | C.D. |

What is the rpm used for spotfacing compared to the rpm used in drilling the same material?

a. 1/4

b. 1/2

c. 3/4

d. 7/8

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.....

37. | H13 | c | MTT | 0890 | C | C.D. |

What is the most common use of a V-block?

a. Clamp in vise

b. Hold square workpiece

c. Hold round workpiece

d. School project

.....

38. | H13 | d | MTT | 0890 | C | C.D. |

What is the first thing to do when drilling a hole using the V-block on a drill press?

a. Center punch

b. Clamp in V-block

c. Set feed

d. Set speed

.....

39. | H13 | a | MTT | 0890 | C | C.D. |

A stop may be set when using V-blocks.

a. True

b. False

.....
40. | H14 | c | MTT | 0890 | C | C.D. |

What is the purpose of reaming a hole?

a. Start a hole

b. Thread a hole

c. Produce a smooth, accurate hole

d. Take the place of a drill

.....
41. | H14 | d | MTT | 0890 | C | C.D. |

What type of reamer is used as a roughing reamer?

a. #2 M.T. reamer

b. Hand reamer

c. Relief reamer

d. Rose reamer

.....
42. | H14 | a | MTT | 0890 | C | C.D. |

What speed and feed rates are used for reaming?

a. One-third that of drilling

b. Three-fourths that of drilling

c. Same as drilling

d. Faster than drilling

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43.	H14	c	MTT	0890	C	C.D.

What size drill should be used for a 1/2" reamer?

a. 31/32"

b. 33/64"

c. 31/64"

d. 17/32"

44.	H15	a	McGraw-Hill	0890	C	C.D.

What is the purpose of a drill jig?

a. Permit quick, accurate drilling

b. Improve training programs

c. Eliminate need for V-blocks

d. Reduce material costs

45.	H15	c	MTT	0890	C	C.D.

How are drill jigs used in production?

a. Substitute for shims

b. Substitute for a vise

c. Drilling holes in large numbers of parts

d. Drilling holes in one part

Field	Contents	Field	Contents
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.....

46. | H16 | a | MTT | 0890 | C | C.D. |

What should always be done when tapping a hole using the drill press?

a. Align hole to be tapped.

b. Set drill press at high speed.

c. Hold part by hand.

d. Tap part without cutting oil.

.....

47. | H16 | b | MTT | 0890 | C | C.D. |

When should the hand tap be removed from the drill chuck?

a. After about one turn

b. After it has turned three or four times

c. About 1" through part

d. When tapping aluminum

.....

48. | H16 | b | MTT | 0890 | C | C.D. |

What threads are cut when using a starting tap?

a. External

b. Internal

c. Rolled

d. Acme

.....
49. | H17 | c | McGraw-Hill | 0890 | C | C.D. |

With a drill press, what speed is best for tapping most materials with a tapping attachment?

a. 20-30 rpm

b. 40-50 rpm

c. 60-100 rpm

d. 120-160 rpm

.....
50. | H17 | b | MTT | 0890 | C | C.D. |

How does the tapping attachment reverse itself?

a. When the machine is turned off

b. With up or down pressure

c. When changing a belt

d. When variable speed is changed

.....
51. | H17 | b | MTT | 0890 | C | C.D. |

When using a tapping attachment, what will happen if a 1/4"-20 tap hits the bottom of a hole too quickly?

a. Machine reverses

b. Breaks the tap

c. Motor will pull down

d. Stops the tapping attachment

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.....
52. | H18 | b | MTT | 0890 | C | C.D. |

What is the recommended clearance angle for twist drills?

a. 5-8 degrees

b. 8-12 degrees

c. 15-30 degrees

d. 120-130 degrees

.....
53. | H18 | a | MTT | 0890 | C | C.D. |

What should be done to a grinding wheel before sharpening a drill bit?

a. Dress

b. True

c. Ring-check

d. Balance

.....
54. | H18 | a | MTT | 0890 | C | C.D. |

How is the cutting edge of a drill bit angle checked?

a. Drill angle gage

b. Hole gage

c. Combination square

d. Machinist's square

.....
55. | H19 | c | MTT | 0890 | C | C.D. |

How is the arm of a smaller radial drill press raised or lowered?

a. Crane

b. Hoist

c. Hand crank

d. Floor jack

.....
56. | H19 | a | MTT | 0890 | C | C.D. |

Which machine is most versatile?

a. Radial drill

b. Multiple drill

c. Turret drill

d. Sensitive drill

.....
57. | H19 | b | MTT | 0890 | C | C.D. |

A radial arm drill press will position the part automatically.

a. True

b. False

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.....
1. | I1 | c | Feirer | 0890 | A | D.M. |

What is best used to remove chips from the lathe?

a. Hand

b. Compressed air

c. Brush

d. Cloth

.....
2. | I1 | d | McKnight | 0890 | A | D.M. |

What is the safest and most efficient tool to use when filing on the lathe?

a. Second cut file with tang removed

b. Double-ended riffler file

c. Long angle file without handle

d. Long angle file with handle

.....
3. | I1 | a | McKnight | 0890 | C | D.M. |

What is the greatest danger of switching the lathe to reverse while it is turning forward?

a. A threaded chuck may unscrew from the spindle.

b. The switch may burn out.

c. The lathe belt may slip.

d. The cutting tool will develop metal buildup on top of it.

4. | I1 | b | Repp | 0890 | C | D.M. |

A continuous chip is desirable when machining a ductile metal on the lathe.

a. True

b. False

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.....
5. | I2 | a | McKnight | 0890 | C | D.M. |

What should be placed below a lathe chuck when removing it from the spindle?

a. Cradle board

b. Oil-soaked cloth

c. Piece of plastic sheeting

d. Piece of galvanized sheet metal

.....
6. | I2 | b | Feirer | 0890 | A | D.M. |

When no coolant is used with a tool-post grinder on a lathe, no cover is needed on the bed ways.

a. True

b. False

.....
7. | I2 | b | McKnight | 0890 | A | D.M. |

When cleaning a lathe, all oil should be wiped off the bed ways and other unpainted parts so they will not attract dirt and dust.

a. True

b. False

.....
8. | I3 | a | McKnight | 0890 | C | D.M. |

When checking accuracy of lathe centers with a test bar and dial indicator, where should the dial indicator be mounted?

a. In the tool post

b. On the bed

c. On the headstock

d. On the tailstock

.....
9. | I3 | a | IML Mod. 5 | 0890 | C | D.M. |

When checking lathe center accuracy with a test bar and dial indicator, the indicator should first be set to check the rotating live center for accuracy.

a. True

b. False

.....
10. | I3 | b | Feirer | 0890 | C | D.M. |

The technique of moving the tailstock center to meet the headstock center is as accurate as the test bar and dial indicator method of aligning centers on a lathe.

a. True

b. False

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.....

11. | I4 | d | McKnight | 0890 | C | D.M. |

Which cutting tool material will withstand the most heat?

a. Hard-cast (nonferrous) alloys

b. High-speed steel

c. Water-hardening steel

d. Tungsten carbide

.....

12. | I4 | a | McKnight | 0890 | C | D.M. |

Which material would best machine with a tool having a negative back rake?

a. Brass

b. Free-machining steel

c. Medium-carbon steel

d. Aluminum

.....

13. | I4 | c | McKnight | 0890 | C | D.M. |

What is the purpose of the back rake angle on a cutting tool?

a. Cools cutting tool tip

b. Promotes tool digging into the workpiece

c. Guides direction of chip flow

d. Prevents cutting tool from rubbing on the stock

.....
14. | I5 | d | TT | 0890 | C | C.W. |

Which is NOT a factor to consider when setting the appropriate rpm for a lathe?

a. Workpiece diameter

b. $\frac{C.S. \times 4}{D}$

c. Condition of the machine

d. Workpiece length

.....
15. | I5 | b | TT | 0890 | C | C.W. |

At what rpm should a lathe be operated to turn a mild steel workpiece (100 fpm) on 1.875" diameter?

a. 113

b. 213

c. 250

d. 400

.....
16. | I5 | b | Repp | 0890 | C | C.W. |

How can cutting speed be expressed?

a. Square feet

b. Surface meters per minute

c. Revo_utions per minute

d. Cubic centimeters

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.....
17. | I6 | a | Repp | 0890 | C | C.W. |

Which is true concerning the side rake angle of a lathe tool?

a. It controls the flow and formation of the chip.

b. It should be zero for most materials.

c. It must be extremely precise.

d. It prevents the cutting edge from heating the workpiece.

.....
18. | I6 | a | Repp | 0890 | C | C.W. |

What is the body portion of a turning tool called?

a. Shank

b. Base

c. Radius

d. Point

.....
19. | I6 | a | Repp | 0890 | C | C.W. |

What is the purpose of relief angles?

a. Prevent tool flanks from rubbing

b. Allow for smooth flow of chips

c. Permit the tool to be withdrawn

d. Provide for heat dissipation

.....
20. | I7 | a | Repp | 0890 | C | C.W. |

Kerosene can be used as a cutting fluid for machining aluminum.

a. True

b. False

.....
21. | I7 | d | Repp | 0890 | C | C.W. |

Compressed air can be used as a coolant for machining which material?

a. Aluminum

b. All steels

c. Brass

d. Cast iron

.....
22. | I7 | b | Repp | 0890 | C | C.W. |

Which is UNTRUE of emulsifiable oils?

a. They are mixed with water.

b. They provide good lubrication.

c. They often contain rust inhibitors.

d. They are excellent for removing heat.

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.....
23. | I8 | d | Repp | 0890 | C | C.W. |

The half-nut lever is associated with which operation?

a. Drilling

b. Taper turning

c. Facing

d. Threading

.....
24. | I8 | b | Repp | 0890 | C | C.W. |

What is the quick-change gearbox used to set?

a. Spindle rpm

b. Feed rate

c. Depth of cut

d. Tailstock feed

.....
25. | I8 | d | Repp | 0890 | C | C.W. |

What is adjusted to set the depth of cut?

a. Quick-change gearbox

b. Tailstock spindle

c. Carriage hand wheel

d. Cross-slide micrometer dial

.....
26. | I9 | a | Repp | 0890 | C | C.W. |

Center drilling permits the workpiece to be held between centers.

a. True

b. False

.....
27. | I9 | b | Repp | 0890 | C | C.W. |

What is the cone angle of a center drill designed to match?

a. The tailstock guide taper

b. 60-degree lathe center

c. The angle of the compound rest

d. The included angle of the lathe tool

.....
28. | I9| c | Repp | 0890 | C | C.W. |

To what portion of its length should the tapered portion of a center drill penetrate the workpiece?

a. 1/4

b. 1/2

c. 3/4

d. Full length

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.....
29. | I10 | d | Repp | 0890 | C | C.W. |

What device is used to center a workpiece in a four-jaw chuck on a lathe?

a. Combination set

b. Wiggler

c. Pin punch

d. Dial indicator

.....
30. | I10 | b | Repp | 0890 | C | C.W. |

What is the proper relationship between the tool tip and the workpiece center on a lathe?

a. Left of center

b. On center

c. Slightly below center

d. Slightly above center

.....
31. | I10 | b | Repp | 0890 | C | C.W. |

What lathe operation requires a center gauge for setup?

a. Facing

b. Threading

c. Knurling

d. Boring

.....
32. | I11 | a | TT | 0890 | C | C.W. |

What lathe accessory is used to provide positive drive on the workpiece when turning between centers?

a. Lathe dog

b. Four-jaw chuck

c. Arbor plate

d. Facing tool

.....
33. | I11 | a | TT | 0890 | C | C.W. |

What device is used to measure side-to-side movement of the tailstock on a lathe?

a. Dial indicator

b. Master square

c. Micrometer dial

d. Bench rule

.....
34. | I11 | d | TT | 0890 | C | C.W. |

Which item is adjusted to eliminate taper from a workpiece on a lathe?

a. Headstock

b. Compound rest

c. Tool post

d. Tailstock

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35. | I12 | b | TT | 0890 | C | C.W. |

Which work-holding device permits the greatest accuracy?

a. Collet chuck

b. Four-jaw chuck

c. Three-jaw universal chuck

d. Rubber-flex chuck

.....
36. | I12 | a | Repp | 0890 | C | C.W. |

Which would NOT be used to center work in a four-jaw chuck?

a. Precision square

b. Wiggler

c. Tailstock center

d. Dial indicator

.....
37. | I12 | b | Repp | 0890 | C | C.W. |

After checking opposite sides of a workpiece in a four-jaw chuck with a dial indicator, how much should the workpiece be moved to center it?

a. One-fourth of the difference

b. One-half of the difference

c. Less than .001"

d. All the difference

.....
38. | I13 | d | TT | 0890 | C | C.W. |

When drilling with a lathe, how is the drill held?

a. In the four-jaw chuck

b. In the headstock

c. In the toolpost

d. In the tailstock

.....
39. | I13 | b | TT | 0890 | C | C.W. |

What tool is used to center and guide a drill on a lathe?

a. Center punch

b. Center drill

c. Knurling tool

d. Reamer

.....
40. | I13 | c | TT | 0890 | C | C.W. |

Why is it necessary to back the drill out of the workpiece several times during the drilling process?

a. Lubricate headstock

b. Adjust the compound rest

c. Clean chips and apply coolant

d. Check spindle speed

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.....
41. | I14 | b | TT | 0890 | C | C.W. |

Feed rate for reaming is generally about the same as for drilling.

a. True

b. False

.....
42. | I14 | c | TT | 0890 | C | C.W. |

What size should the preparatory hole be for using a 1/2" machine reamer?

a. 9/16"

b. 7/16"

c. 31/64"

d. 33/64"

.....
43. | I14 | b | TT | 0890 | C | C.W. |

It is generally unnecessary to use cutting fluid when reaming on the lathe.

a. True

b. False

.....
44. | I15 | a | TT | 0890 | C | C.W. |

When boring, depth of cut is established by turning the cross-slide micrometer dial counterclockwise.

a. True

b. False

.....
45. | I15 | d | TT | 0890 | C | C.W. |

What tool is used to check the diameter of a bored hole?

a. Pin gauge

b. Outside micrometer

c. Center gage

d. Telescoping gage

.....
46. | I15 | c | TT | 0890 | C | C.W. |

How much material should be left in a drilled hole to bore for finishing?

a. .001"

b. .002"

c. .010"

d. .075"

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.....
47. | I16 | d | TT | 0890 | C | C.W. |

What tool is used to remove the burr from a drilled hole?

a. Counterbore

b. Counter drill

c. Center drill

d. Countersink

.....
48. | I16 | a | TT | 0890 | C | C.W. |

How is the countersink held?

a. In the tailstock

b. On the compound rest

c. In the headstock

d. In the tool post

.....
49. | I16 | c | Repp | 0890 | C | C.W. |

What is the included angle of a countersink for deburring?

a. 10 degrees

b. 25 degrees

c. 90 degrees

d. 180 degrees

.....
50. | I17 | a | Repp | 0890 | C | C.W. |

What is the purpose of a counterbore?

a. Enlarge a hole

b. Deburr

c. Align incorrectly drilled holes

d. Ream short sections

.....
51. | I17 | a | TT | 0890 | C | C.W. |

Counterboring can be performed with a single-point boring tool.

a. True

b. False

.....
52. | I17 | b | Repp | 0890 | C | C.W. |

Counterbores should be run at higher speeds than drills of the same diameter.

a. True

b. False

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.....
53. | I18 | d | TT | 0890 | C | C.W. |

What operation deforms rather than cuts the surface of the workpiece?

a. Threading

b. Turning

c. Facing

d. Knurling

.....
54. | I18 | a | TT | 0890 | C | C.W. |

A diamond-pattern knurling tool is used to provide a suitable grip on a workpiece.

a. True

b. False

.....
55. | I18 | b | TT | 0890 | C | C.W. |

A knurling tool on a lathe need not be set exactly on center.

a. True

b. False

.....
56. | I19 | d | TT | 0890 | C | C.W. |

Which tool is used to check the angle of a 60-degree threading tool?

a. Cutter gauge

b. Rose-radius comparator

c. Micrometer calipers

d. Center gauge

.....
57. | I19 | a | Repp | 0890 | C | C.W. |

The point of a threading tool may be a radius or a flat.

a. True

b. False

.....
58. | I19 | b | Repp | 0890 | C | C.W. |

What is the proper end relief for a 60-degree lathe threading tool?

a. 1-2 degrees

b. 8-10 degrees

c. 20-35 degrees

d. 60 degrees

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.....
59. | I20 | d | Repp | 0890 | C | C.W. |

To what angle should the compound rest be turned to cut threads on a lathe with a single-point tool?

a. 60 degrees

b. 45 degrees

c. 30 1/2 degrees

d. 29 1/2 degrees

.....
60. | I20 | c | Repp | 0890 | C | C.W. |

To achieve the desired number of threads per inch, which lathe component must be adjusted?

a. Headstock

b. Carriage levers

c. Quick-change gear box

d. Tailstock

.....
61. | I20 | a | Repp | 0890 | C | C.W. |

When an odd number of threads must be cut, where should the thread dial be set?

a. On any number

b. On odd numbers only

c. On even numbers only

d. On any lined graduation

.....
62. | I21 | b | TT | 0890 | C | C.W. |

Which is the correct tap drill size for cutting a 1 1/2" 7 UNC internal thread?

a. 1.250

b. 1.357

c. 1.458

d. 1.5

.....
63. | I21 | b | TT | 0890 | C | C.W. |

How must the compound rest be set for internal threading?

a. 0 degrees

b. 29.5 degrees to the left

c. 29.5 degrees to the right

d. 90 degrees

.....
64. | I21 | a | Repp | 0890 | C | C.W. |

A thread pitch gage can be used to check for the correct number of internal threads.

a. True

b. False

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.....
65. | I22 | b | Repp | 0890 | C | C.W. |

What is the included angle of ISO metric threads?

a. 30 degrees

b. 60 degrees

c. 80 degrees

d. 90 degrees

.....
66. | I22 | d | Repp | 0890 | C | C.W. |

How is metric thread pitch expressed?

a. Number of threads per inch

b. Number of threads per meter

c. Number of threads per centimeter

d. Lead per revolution in millimeters

.....
67. | I22 | a | Repp | 0890 | C | C.W. |

To set the pitch for cutting metric threads, adjust the quick-change gearbox.

a. True

b. False

.....
68. | I23 | b | TT | 0890 | C | C.W. |

When machining a taper with the compound rest, the lead screw must be engaged.

a. True

b. False

.....
69. | I23 | c | TT | 0890 | C | C.W. |

To what angle should the compound rest be adjusted to cut a 90-degree included angle taper?

a. 15 degrees

b. 30 degrees

c. 45 degrees

d. 90 degrees

.....
70. | I23 | b | TT | 0890 | C | C.W. |

The compound rest is well suited to cut long tapers on work held between centers.

a. True

b. False

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.....
71. | I24 | b | TT | 0890 | C | C.W. |

What is the tailstock offset for turning a .2 tpi on a 12" long workpiece?

a. .2"

b. 1.2"

c. 1.5"

d. 2.0"

.....
72. | I24 | b | TT | 0890 | C | C.W. |

What is the taper per foot on a 10" taper with a large end of 1 1/2" diameter and a small end of 3/4" diameter?

a. .5 tpf

b. .9 tpf

c. 1.5 tpf

d. 10 tpf

.....
73. | I24 | a | TT | 0890 | C | C.W. |

The tailstock offset method of taper turning is best suited to making long tapers.

a. True

b. False

.....
74. | I25 | a | TT | 0890 | C | C.W. |

A taper attachment can be used to produce tapers on work held either between centers or in a chuck.

a. True

b. False

.....
75. | I25 | a | TT | 0890 | C | C.W. |

When using a taper attachment, the compound rest can be used to feed the tool into the work.

a. True

b. False

.....
76. | I25 | a | Repp | 0890 | C | C.W. |

The angle of a taper attachment can be set using a taper bar and a dial indicator.

a. True

b. False

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77. | I26 | b | TT | 0890 | C | C.W. |

When cutting an internal taper with the taper attachment, how is the depth of cut set?

a. Turn compound rest clockwise

b. Turn compound rest counterclockwise

c. Turn carriage handwheel

d. Turn cross-slide clockwise

.....
78. | I26 | a | TT | 0890 | C | C.W. |

A long, narrow, internal taper may require the use of a boring bar.

a. True

b. False

.....
79. | I26 | a | TT | 0890 | C | C.W. |

Large, short, internal tapers can be turned using a standard toolpost and toolholder.

a. True

b. False

.....
80. | I27 | a | TT | 0890 | C | C.W. |

When mounting a heavy, awkward piece of work to a faceplate, the faceplate should be mounted in the lathe.

a. True

b. False

.....
81. | I27 | b | TT | 0890 | C | C.W. |

It is NOT possible to hold round work on a faceplate.

a. True

b. False

.....
82. | I27 | a | TT | 0890 | C | C.W. |

Which is most valuable in aligning work held in a faceplate?

a. Dial indicator

b. Center punch

c. Wiggler

d. Vernier caliper

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.....
83. | I28 | c | TT | 0890 | C | C.W. |

Which is NOT a good reason for filing in the lathe?

a. Deburring

b. Improve finish

c. Improve accuracy

d. Removing tool marks

.....
84. | I28 | b | TT | 0890 | C | C.W. |

It is unnecessary to use a file handle when filing on the lathe because the tang is held away from the operator.

a. True

b. False

.....
85. | I28 | b | TT | 0890 | C | C.W. |

When filing in the lathe, it is best to use many short, quick strokes.

a. True

b. False

.....
86. | I29 | b | TT | 0890 | C | C.W. |

Use of a dead center in the tailstock is recommended while polishing.

a. True

b. False

.....
87. | I29 | b | TT | 0890 | C | C.W. |

What is the best abrasive for polishing aluminum in the lathe?

a. Flint powder

b. Silicon carbide

c. Garnet

d. Diamond

.....
88. | I29 | a | TT | 0890 | C | C.W. |

When polishing in the lathe, the bed should be covered by paper to prevent contact with abrasive particles.

a. True

b. False

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.....
89. | I30 | c | TT | 0890 | C | C.W. |

How is work usually mounted when working with a steady rest?

a. On a faceplate

b. In a collet

c. Between centers

d. In a Jacob's chuck

.....
90. | I30 | d | Repp | 0890 | C | C.W. |

To what part of the lathe is a follower rest mounted?

a. Bed

b. Headstock

c. Tailstock

d. Saddle

.....
91. | I30 | c | Repp | 0890 | C | C.W. |

What is the purpose of a steady rest?

a. Provide support for taking extremely heavy cuts on a workpiece

b. Permit the operator to leave the machine unattended

c. Assist in holding and aligning extra long workpieces

d. Provide a means of machining a short, steep taper

.....
92. | I31 | b | TT | 0890 | C | C.W. |

How is the quick-change gearbox set to produce a 3/4-16 UNC-1/8 lead 2 start thread?

a. 3 tpi

b. 8 tpi

c. 12 tpi

d. 16 tpi

.....
93. | I31 | b | TT | 0890 | C | C.W. |

To what angle should the compound rest be set to cut multiple start threads by the compound rest method?

a. 20 degrees

b. 29.5 degrees

c. 90 degrees

d. 120 degrees

.....
94. | I31 | a | TT | 0890 | C | C.W. |

What distance (lead) will a 3/4-10 UNC double-lead thread travel in one revolution?

a. 1/5"

b. 1/8"

c. 1/10"

d. 1/20"

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.....
95. | I32 | c | TT | 0890 | C | C.W. |

What is the included angle of an Acme thread?

a. 10 degrees

b. 14.5 degrees

c. 29 degrees

d. 58 degrees

.....
96. | I32 | b | TT | 0890 | C | C.W. |

An Acme threading tool has a 1/32 radius at its tip.

a. True

b. False

.....
97. | I32 | a | TT | 0890 | C | C.W. |

When cutting Acme threads, to what angle should the compound rest be set?

a. 14.5 degrees

b. 29.5 degrees

c. 59 degrees

d. 60 degrees

.....
98. | I33 | c | TT | 0890 | C | C.W. |

Which method is used to turn a long form on a workpiece?

a. Radius turning attachment

b. Radius tool

c. Tracer attachment

d. 60-degree threading tool

.....
99. | I33 | a | TT | 0890 | C | C.W. |

Which method is used to machine large convex and concave forms?

a. Radius turning attachment

b. Radius tool

c. Template with follower

d. 60-degree threading tool

.....
100. | I33 | b | TT | 0890 | C | C.W. |

A small radius on the end of a workpiece can be machined with a 60-degree V-tool.

a. True

b. False

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.....
101. | I34 | b | TT | 0890 | C | C.W. |

A lathe mandrel has a relatively large taper of .020" per inch of length.

a. True

b. False

.....
102. | I34 | a | TT | 0890 | C | C.W. |

What is used for positive drive of a lathe mandrel?

a. Lathe dog

b. Tailstock center

c. Center lubrication

d. Collet chuck

.....
103. | I34 | b | TT | 0890 | C | C.W. |

A mandrel is usually made from soft material so the workpiece will not be damaged.

a. True

b. False

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.....

1. | J1 | b | IML Mod. 6 | 0890 | C | J.C. |

When milling with a two-flute cutter, the safest way is to climb-mill.

a. True

b. False

.....

2. | J1 | a | IML Mod. 6 | 0890 | C | J.C. |

The safest way to do any milling is to lock the table opposite the travel of the cutter.

a. True

b. False

.....

3. | J1 | a | IML Mod. 6 | 0890 | C | J.C. |

The safest way to remove and replace a vise from the milling machine is to have help from a fellow worker.

a. True

b. False

.....
4. | J2 | b | IML Mod. 6 | 0890 | C | J.C. |

As long as the milling machine is running smoothly, there is no need to oil the spindle.

a. True

b. False

.....
5. | J2 | b | IML Mod. 6 | 0890 | C | J.C. |

The care and maintenance of a milling machine should be done by the janitor.

a. True

b. False

.....
6. | J2 | a | IML Mod. 6 | 0890 | C | J.C. |

A milling machine with a one-shot oiling system oils the table and knee assembly.

a. True

b. False

153

Field	Contents	Field	Contents
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.....
7. | J3 | a | IML Mod. 6 | 0890 | C | J.C. |

When aligning the milling head to the table, the right and left adjustments are aligned first.

a. True

b. False

.....
8. | J3 | b | IML Mod. 6 | 0890 | C | J.C. |

The correct way to tram the mill is to use precision-ground parallels or gage blocks.

a. True

b. False

.....
9. | J3 | b | IML Mod. 6 | 0890 | C | J.C. |

When aligning the milling head to the table, align the head with the workpiece.

a. True

b. False

.....
10. | J4 | a | IML Mod. 6 | 0890 | C | J.C. |

What is used when aligning the vise to the milling head?

a. Dial indicator

b. Edge finder

c. Solid square

d. Combination square

.....
11. | J4 | c | IML Mod. 6 | 0890 | C | J.C. |

With what precision-ground piece are V-blocks aligned on a milling machine?

a. Round stock and edge finder

b. Square stock and edge finder

c. Round stock and dial indicator

d. Square stock and dial indicator

.....
12. | J4 | b | IML Mod. 6 | 0890 | C | J.C. |

With what are the boring bar and workpiece aligned on the milling machine?

a. Combination square

b. Dial indicator

c. Edge finder

d. Solid square

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.....
13. | J5 | d | IML Mod. 6 | 0890 | C | J.C. |

What is done to align a workpiece on a milling table?

a. Indicate top only

b. Indicate sides only

c. Indicate ends

d. Indicate top and sides

.....
14. | J5 | d | IML Mod. 6 | 0890 | C | J.C. |

How is a cylindrical workpiece mounted to align it on a milling table?

a. Directly to table

b. Parallels

c. Step blocks

d. V-blocks

.....
15. | J5 | c | IML Mod. 6 | 0890 | C | J.C. |

When drilling through-holes, how is a large, square workpiece mounted to align it on a milling table?

a. Gage blocks

b. V-blocks

c. Parallels

d. Plywood spacers

.....
16. | J6 | b | IML Mod. 6 | 0890 | C | J.C. |

When calculating feeds and speeds, the type of material has no effect.

a. True

b. False

.....
17. | J6 | b | IML Mod. 6 | 0890 | C | J.C. |

When calculating feeds and speeds, the type of cutting fluid has no effect.

a. True

b. False

.....
18. | J6 | a | IML Mod. 6 | 0890 | C | J.C. |

When calculating milling feeds and speeds, the rpm may be different for a step pulley and a variable drive.

a. True

b. False

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.....

19. | J7 | b | IML Mod. 6 | 0890 | C | J.C. |

What is the best method for applying a cutting fluid for heavy or rough cuts?

a. Air

b. Flood

c. Mist

d. Pressurized

.....

20. | J7 | c | IML Mod. 6 | 0890 | C | J.C. |

What is the best method for applying a cutting fluid for a finish or fine cut?

a. Air

b. Flood

c. Mist

d. Pressurized

.....

21. | J7 | c | IML Mod. 6 | 0890 | C | J.C. |

What is the best cutting fluid for milling most metals?

a. Compressed air

b. Mineral oil

c. Soluble oil

d. Sulfur-based

.....
22. | J8 | a | IML Mod. 6 | 0890 | C | J.C. |

The type of material to be milled determines the type of cutter to be used.

a. True

b. False

.....
23. | J8 | b | IML Mod. 6 | 0890 | C | J.C. |

The rate of feed is the same for both two-flute and four-flute cutters.

a. True

b. False

.....
24. | J8 | b | IML Mod. 6 | 0890 | C | J.C. |

Right-hand and left-hand fluted end mills rotate in the same direction.

a. True

b. False

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.....
25. | J9 | a | IML Mod. 6 | 0890 | C | J.C. |

To square a workpiece, the largest side should be milled first.

a. True

b. False

.....
26. | J9 | a | IML Mod. 6 | 0890 | C | J.C. |

The proper way to square a workpiece in a vise is to use a precision-ground dowell pin.

a. True

b. False

.....
27. | J9 | a | IML Mod. 6 | 0890 | C | J.C. |

When squaring a workpiece, a reduced feed rate will produce a better finish.

a. True

b. False

.....
28. | J10 | a | IML Mod. 6 | 0890 | C | J.C. |

Which type of mill should be used to mill a captive slot with an end mill?

a. Center cut

b. Two-flute

c. Single end

d. Double end

.....
29. | J10 | b | IML Mod. 6 | 0890 | C | J.C. |

What should be used when milling graphite with an end mill?

a. Plunge feed

b. Low feed rate

c. Cutting oil

d. Low rpm

.....
30. | J10 | a | IML Mod. 6 | 0890 | C | J.C. |

What is the best procedure for milling a deep slot in a workpiece?

a. Make several cuts

b. Make two plunge cuts

c. Make one cut

d. Any of the above

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.....
31. | J11 | a | IML Mod. 6 | 0890 | C | J.C. |

Which quadrant is best to use in locating an edge with an edge finder?

a. +x +y

b. +x -y

c. -x -y

d. -x +y

.....
32. | J11 | a | IML Mod. 6 | 0890 | C | J.C. |

What should be used to hold an edge finder?

a. Collet

b. Drill chuck

c. C clamp

d. Magnetic holder

.....
33. | J11 | c | IML Mod. 6 | 0890 | C | J.C. |

At what rpm should an edge finder run?

a. 200

b. 400

c. 1,000

d. 1,500

.....
34. | J12 | a | IML Mod. 6 | 0890 | C | J.C. |

What is the best tool holder for drill bits on a mill?

a. Drill chuck

b. Boring head

c. Boring bar

d. Solid collet

.....
35. | J12 | a | IML Mod. 6 | 0890 | C | J.C. |

What method is best when tool steel is drilled on a mill?

a. Pecking motion

b. Plunge drilling

c. Power feed

d. Slow feed rate

.....
36. | J12 | a | IML Mod. 6 | 0890 | C | J.C. |

What should be used when drilling most metals?

a. Cutting oil

b. Coolant fluid

c. No fluids

d. Air

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.....

37. | J13 | c | IML Mod. 6 | 0890 | C | J.C. |

What rpm should be used for reaming holes with a milling machine after drilling?

a. Same rpm as drilling

b. Increased rpm

c. Reduced rpm

d. None of the above

.....

38. | J13 | a | IML Mod. 6 | 0890 | C | J.C. |

What should be done when reaming holes in mild/soft metal?

a. Leave more material to be reamed.

b. Leave less material to be reamed.

c. Drill the hole to the exact size.

d. None of the above

.....

39. | J13 | a | IML Mod. 6 | 0890 | C | J.C. |

What should be used when reaming holes in tool steel?

a. Cutting oil

b. Coolant fluid

c. No fluids

d. None of the above

.....
40. | J14 | a | IML Mod. 6 | 0890 | C | J.C. |

How should a cutter be set when boring aluminum?

a. Positive back rake

b. Negative back rake

c. No back rake

d. None of the above

.....
41. | J14 | b | IML Mod. 6 | 0890 | C | J.C. |

Hand-feeding the boring bar will produce the best finish.

a. True

b. False

.....
42. | J14 | a | IML Mod. 6 | 0890 | C | J.C. |

When boring on a milling machine, it is best to bore only on the down stroke.

a. True

b. False

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.....
43. | J15 | b | IML Mod. 6 | 0890 | C | J.C. |

When milling a beveled edge, what type of cutter is recommended?

a. Radius

b. Chamfer

c. Ball-nose

d. T-slot

.....
44. | J15 | d | IML Mod. 6 | 0890 | C | J.C. |

When milling a concave corner, what type of cutter is recommended?

a. Chamfer

b. Radius

c. Straight-end mill

d. Ball-nose

.....
45. | J15 | a | IML Mod. 6 | 0890 | C | J.C. |

When milling a T-slot, what operation is performed?

a. Mill to minor diameter and depth first.

b. Mill to proper depth with correct T-slot cutter.

c. Mill by several passes to depth of T-slot cutter.

d. None of the above

.....
46. | J16 | a | IML Mod. 6 | 0890 | C | J.C. |

When machining a workpiece mounted on V-blocks, opposing flats can be milled without remounting the workpiece.

a. True

b. False

.....
47. | J16 | b | IML Mod. 6 | 0890 | C | J.C. |

Dovetail slots cannot be milled on a workpiece mounted on V-blocks.

a. True

b. False

.....
48. | J16 | a | IML Mod. 6 | 0890 | C | J.C. |

V-blocks can be mounted in a vise to hold the workpiece.

a. True

b. False

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.....

49. | J17 | a | IML Mod. 6 | 0890 | C | J.C. |

External keyways are milled on round/tapered stock.

a. True

b. False

.....

50. | J17 | b | IML Mod. 6 | 0890 | C | J.C. |

A captive keyway cannot be milled externally.

a. True

b. False

.....

51. | J17 | b | IML Mod. 6 | 0890 | C | J.C. |

External straight keyways are milled best with a standard end mill.

a. True

b. False

.....
52. | J18 | a | IML Mod. 6 | 0890 | P | J.C. |

What is the first step in machining a Woodruff keyway?

a. Determine size of keyway

b. Determine depth of keyway

c. Determine the cutter number

d. None of the above

.....
53. | J18 | b | IML Mod. 6 | 0890 | C | J.C. |

A Woodruff keyway can be cut on top and side of a surface at the same time.

a. True

b. False

.....
54. | J18 | a | IML Mod. 6 | 0890 | C | J.C. |

Woodruff keyways are usually cut in what shape of material?

a. Round shafts

b. Square shafts

c. Flat surfaces

d. Hexagonal shafts

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.....

55. | J19 | c | IML Mod. 6 | 0890 | C | J.C. |

What is the best way to mill an angle with a plain vise?

a. Yaw the head

b. Shim the vise

c. Angled parallel

d. None of the above

.....

56. | J19 | a | IML Mod. 6 | 0890 | C | J.C. |

An angle can be milled on a workpiece using a rotary table.

a. True

b. False

.....

57. | J19 | a | IML Mod. 6 | 0890 | C | J.C. |

What is the best set-up for milling a compound angle?

a. Universal vise

b. Swivel vise

c. Plain vise

d. Angled parallels

.....
58. | J20 | b | IML Mod. 6 | 0890 | C | J.C. & C.D. |

How is the rotary table centered with the spindle on the vertical milling machine?

a. 6" scale

b. Dial indicator

c. Dial caliper

d. Center gage

.....
59. | J20 | a | IML Mod. 6 | 0890 | C | J.C. & C.D. |

What is the purpose of the hole in the center of a rotary table?

a. Alignment

b. Less weight on table

c. Looks better

d. Holding part to table

.....
60. | J20 | b | IML Mod. 6 | 0890 | C | J.C. & C.D. |

When machining an external radius with a rotary table, which type of milling is most common?

a. Climb

b. Conventional

c. Radius

d. Square

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.....

61. | J21 | c | McGraw-Hill | 0890 | C | J.C. & C.D. |

What are the two types of milling rotary tables?

a. Left and right

b. Up and down

c. Stationary and reciprocating

d. Vertical and horizontal

.....

62. | J21 | b | MTT | 0890 | C | J.C. & C.D. |

What is the most common use of a rotary table?

a. Gear cutting

b. Milling circles and arcs

c. Reaming

d. Boring

.....

63. | J21 | a | McGraw-Hill | 0890 | C | J.C. & C.D. |

What is the purpose of T-slots on the rotary table?

a. Clamping of the workpiece

b. Catch chips

c. Appearance

d. Catch excess cutting oil

.....
64. | J22 | a | McGraw-Hill | 0890 | C | J.C. & C.D. |

In simple indexing, how many teeth are on the worm wheel?

a. 40

b. 30

c. 20

d. 10

.....
65. | J22 | d | McGraw-Hill | 0890 | C | J.C. & C.D. |

How many turns of the crank of a dividing head are needed to turn the part one complete turn in simple indexing?

a. 10

b. 20

c. 30

d. 40

.....
66. | J22 | a | McGraw-Hill | 0890 | C | J.C. & C.D. |

How are the number of divisions needed for indexing calculated?

a. Divide

b. Multiply

c. Subtract

d. Add

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.....
67. | J23 | a | Olivo | 0890 | C | C.S. |

How accurate is a vertical mill's digital readout unit?

a. .0001

b. .0005

c. .0010

d. .0050

.....
68. | J23 | a | Olivo | 0890 | C | C.S. |

A digital readout reads in absolute and incremental measurements.

a. True

b. False

.....
69. | J23 | b | Olivo | 0890 | C | C.S. |

A digital readout can control X and Y table movement automatically.

a. True

b. False

.....
70. | J24 | b | IML Mod. 6 | 0890 | C | B.D. |

Which process involves milling two sides of a block simultaneously?

a. Fluting mill

b. Straddle milling

c. Double milling

d. Slotting

.....
71. | J24 | d | IML Mod. 6 | 0890 | C | B.D. |

Which type of milling machine can perform straddle milling?

a. Planetary

b. Vertical

c. Fixed bed

d. Horizontal

.....
72. | J24 | c | IML Mod. 6 | 0890 | C | B.D. |

What is used to separate the cutters to the required length for straddle milling?

a. Backlash eliminator

b. Arbor nuts

c. Spacers

d. Arbor support

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.....
73. | J25 | b | Repp | 0890 | C | C.W. |

What method of machining uses several cutters in a single operation?

a. Boring

b. Gang milling

c. End milling

d. Gear cutting

.....
74. | J25 | b | Repp | 0890 | C | C.W. |

Which machine setup is used frequently in gang milling?

a. Horizontal milling machine

b. Horizontal milling machine with type A or B arbor

c. Horizontal milling machine with type C arbor

d. Vertical milling machine

.....
75. | J25 | a | Repp | 0890 | C | C.W. |

In gang milling, the form produced on the workpiece is determined by the diameter and width of the cutters used.

a. True

b. False

.....
76. | J26 | b | Repp | 0890 | C | C.W. |

Gear-cutting operations are usually performed on a vertical milling machine and require very little special equipment.

a. True

b. False

.....
77. | J26 | a | Repp | 0890 | C | C.W. |

When machining a spur gear, the gear blank can be mounted between centers on an indexing head.

a. True

b. False

.....
78. | J26 | c | Repp | 0890 | C | C.W. |

What features of a gear will the gear tooth vernier measure?

a. Gear diameter and metric module pitch

b. Hub size

c. Chordal thickness and addendum distance

d. Pitch and number of teeth

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.....

1. | K1, L1 | b | IML Mod. 7 | 0890 | C | C.S. |

How long should a grinding wheel run at full speed before work is started?

a. 15 sec.

b. 30 sec.

c. 45 sec.

d. 1 min.

.....

2. | K1, L1 | c | IML Mod. 7 | 0890 | C | C.S. |

What type of eye protection should be worn at all times in the shop?

a. Contacts

b. Face shield

c. Safety glasses

d. Sun glasses

.....

3. | K1, L1 | a | IML Mod. 7 | 0890 | A | C.S. |

What is the BEST advice regarding stopping a grinding wheel after it has been turned off?

a. Never stop the wheel with hands.

b. Stop a slow-moving wheel with hands.

c. Use a block of wood to stop the wheel.

d. Use a piece of steel to stop the wheel.

| 4. | K1, L1 | c | IML Mod. 7 | 0890 | A | C.S. |

What should be done if a person is cut by a grinding wheel?

a. Wash the cut with coolant.

b. Keep working.

c. Report to instructor.

d. Go home without reporting it.

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.....
5. | K2 | b | Olivo | 0890 | C | C.S. |

What is the oil sight glass used for?

a. To see inside the machine

b. To see the oil level in the machine

c. To make the machine look better

d. To remove and add oil.

.....
6. | K2 | c | Olivo | 0890 | A | C.S. |

What should NOT be used to clean a surface grinder?

a. Shop towel

b. Scraper

c. Air hose

d. Brush

.....
7. | K2 | d | Olivo | 0890 | C | C.S. |

What should be used to lubricate a surface grinder?

a. Water

b. Light oil

c. Heavy grease

d. Manufacturer's recommendation

.....
8. | K3 | c | Olivo | 0890 | C | C.S. |

What grinding fluid is most recommended for medium to heavy stock removal?

a. Cutting oil

b. Water-soluble oil

c. Water-soluble chemical

d. Water

.....
9. | K3 | c | Olivo | 0890 | C | C.S. |

What grinding fluid is most recommended for accurate removal of very hard stock?

a. Cutting oil

b. Water-soluble oil

c. Water-soluble chemical

d. Water

.....
10. | K3 | b | Olivo | 0890 | C | C.S.

What grinding fluid is most recommended for light to moderate stock removal?

a. Cutting oil

b. Water-soluble oil

c. Water-soluble chemical

d. Water

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.....
11. | K4, L3 | b | Olivo | 0890 | C | C.S. |

What should a grinding wheel be inspected for before it is used?

a. Dirt

b. Cracks

c. Oil

d. Size

.....
12. | K4 | b | Olivo | 0890 | C | C.S. |

What method is used to test a grinding wheel for cracks?

a. Visual

b. Ring test

c. Black light

d. Touch

.....
13. | K4 | d | Olivo | 0890 | C | C.S. |

What should always be visible on each side of the wheel?

a. Wheel size

b. Wheel grit

c. Brand name

d. Blotters

.....
14. | K5 | b | IML Mod. 7 | 0890 | C | C.S. |

To balance a grinding wheel, it should be rotated 90 degrees.

a. True

b. False

.....
15. | K5 | a | Olivo | 0890 | C | C.S. |

A grinding wheel should be mounted on the mandrel before it is balanced.

a. True

b. False

.....
16. | K5 | a | Olivo | 0890 | C | C.S. |

A balanced grinding wheel will help the grinder run more smoothly.

a. True

b. False

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.....
17. | K6 | c | Olivo | 0890 | C | C.S. |

What does the 46 mean on a grinding wheel labeled 32A46-F8VBE?

a. Date of manufacture

b. Weight

c. Grit

d. Hardness

.....
18. | K6 | d | Olivo | 0890 | C | C.S. |

What does the F mean on a grinding wheel labeled 32A46-F8VBE?

a. Year of manufacture

b. Weight

c. Grit

d. Hardness

.....
19. | K6 | a | Olivo | 0890 | A | C.S. |

Before a grinding wheel is mounted, what should the operator do?

a. Ring test the wheel

b. Wipe the wheel

c. Write the grit size on the wheel

d. Replace the blotters

.....
20. | K7 | c | Olivo | 0890 | C | C.S. |

What is a sign of a loaded grinding wheel?

a. Smooth cutting

b. Dull grit

c. Workpiece burn marks

d. Vibrating grinder

.....
21. | K7 | b | Olivo | 0890 | C | C.S. |

What is the common drag angle for mounting the diamond dresser?

a. 1-3 degrees

b. 3-15 degrees

c. 15-25 degrees

d. None of the above

.....
22. | K7 | b | Olivo | 0890 | A | C.S. |

The wheel should always be tested by grinding before dressing.

a. True

b. False

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.....
23. | K8 | d | Olivo | 0890 | C | C.S. |

What should be set when using power travel on the grinder table?

a. Oil level

b. Wheel speed

c. Diamond dresser

d. Table stroke dogs

.....
24. | K8 | a | Olivo | 0890 | C | C.S. |

When using automatic down feed, what is the common fine-feed increment?

a. .0001-.0009

b. .001-.009

c. .010-.020

d. .040-.065

.....
25. | K8 | d | Olivo | 0890 | C | C.S. |

What must always be done when using a magnetic chuck?

a. Oil chuck

b. Block up large parts

c. Set back rail

d. Turn on magnet

.....
26. | K9 | a | Olivo | 0890 | A | C.S. |

What tool should be used when grinding stock square?

a. Angle plate

b. V-block

c. Diamond stick

d. Combination square

.....
27. | K9 | d | Olivo | 0890 | C | C.S. |

To grind a part square, what should be used to hold the part in the grinder?

a. Back-up blocks

b. Magnet

c. Machine vise

d. Precision angle plate

.....
28. | K9 | b | Olivo | 0890 | C | C.S. |

To grind a block square, the operator must use a precision level.

a. True

b. False

187

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.....

29. | K10 | b | Olivo | 0890 | C | C.S. |

The magnet should be turned off all the way before indicating a part.

a. True

b. False

.....

30. | K10 | b | Olivo | 0890 | C | C.S. |

When indicating a workpiece, what should be done?

a. Set part on the magnet and eyeball.

b. With magnet turned on lightly, indicate the workpiece edge.

c. Indicate the table with the head.

d. Using a rule, line up the part and run.

.....
31. | K11 | a | Olivo | 0890 | C | C.S. |

To grind an angular surface, a sine bar is a very accurate way to set the angle.

a. True

b. False

.....
32. | K11 | e | Olivo | 0890 | C | C.S. |

Which tools are used to grind an angle?

a. Sine bar

b. Sine chuck

c. Angle plate and sine bar

d. Magnetic V-block

e. All of the above

.....
33. | K11 | a | Olivo | 0890 | C | C.S. |

To grind some angles, the operator may need to use a sine bar and angle plate together.

a. True

b. False

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.....
34. | K12 | d | Olivo | 0890 | C | C.S. |

To what tolerance are toolroom cylindrical grinders capable of grinding round cylinders?

a. .001

b. .0002

c. .0006

d. .000025

.....
35. | K12 | d | Olivo | 0890 | C | C.S. |

What are the tapers that can be cut on a cylindrical grinder with a swivel table?

a. 45-60 degrees

b. 30-45 degrees

c. 10-25 degrees

d. 0-20 degrees

.....
36. | K12 | b | Olivo | 0890 | C | C.S. |

A cylindrical grinder is NOT suited for internal grinding.

a. True

b. False

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.....

1. | L1, K1 | b | IML Mod. 7 | 0890 | C | C.S. |

How long should a grinding wheel run at full speed before work is started?

a. 15 sec.

b. 30 sec.

c. 45 sec.

d. 1 min.

.....

2. | L1, K1 | c | IML Mod. 7 | 0890 | C | C.S. |

What type of eye protection should be worn at all times in the shop?

a. Contacts

b. Face shield

c. Safety glasses with side shields

d. Sun glasses

.....

3. | L1, K1 | a | IML Mod. 7 | 0890 | A | C.S. |

What is the best advice regarding stopping a grinding wheel after it has been turned off?

a. Never stop the wheel with hands.

b. Stop a slow-moving wheel with hands.

c. Use a block of wood to stop the wheel.

d. Use a piece of steel to stop the wheel.

.....
4. | L1, K1 | c | IML Mod. 7 | 0890 | A | C.S. |

What should be done if a person is cut by a grinding wheel?

a. Wash the cut with coolant.

b. Keep working.

c. Report to instructor.

d. Go home without reporting it.

.....
5. | L1 | a | Olivo | 0890 | C | C.S. |

While running a cutter grinder, the operator should be very careful not to hit tooling.

a. True

b. False

.....
6. | L1 | b | Olivo | 0890 | A | C.S. |

Sharpened cutters can be handled without a rag or gloves.

a. True

b. False

.....
7. | L1 | a | Olivo | 0890 | A | C.S. |

If a grinding wheel has been dropped, it should be ring-tested before mounting it on the machine.

a. True

b. False

Field	Contents	Field	Contents
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.....
8. | L2 | a | IML Mod. 7 | 0890 | C | C.S. |

The grinder should be clean and oiled for best operation.

a. True

b. False

.....
9. | L2 | b | IML Mod. 7 | 0890 | A | C.S. |

The grinder should be cleaned with an air hose.

a. True

b. False

.....
10. | L2 | a | IML Mod. 7 | 0890 | A | C.S. |

The operator should take time to check the grinding machine for any loose or broken parts.

a. True

b. False

.....
11. | L3, K4 | b | Olivo | 0890 | C | C.S. |

What should a grinding wheel be inspected for before it is used?

a. Dirt

b. Cracks

c. Oil

d. Age

.....
12. | L3 | a | Olivo | 0890 | C | C.S. |

Before putting the grinding wheel on the spindle, inspect it for blotters.

a. True

b. False

.....
13. | L3 | b | Olivo | 0890 | C | C.S. |

If the grinding wheel does not fit, it should be forced on.

a. True

b. False

Field	Contents	Field	Contents
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.....
14. | L4 | d | Olivo | 0890 | C | C.S. |

What type of wheel is used for hard material?

a. Coarse grit

b. Fine

c. Hard

d. Soft

.....
15. | L4 | c | Olivo | 0890 | C | C.S. |

What type of wheel is used to grind a sharp corner against a shoulder?

a. Coarse grit

b. Wide

c. Hard

d. Soft

.....
16. | L4 | c | Olivo | 0890 | C | C.S. |

What does the operator wipe off before mounting a grinding wheel?

a. Table

b. Dresser

c. Flange

d. Hand wheel

.....
17. | L5 | b | Olivo | 0890 | C | C.S. |

On a surface grinder, which tool is best for dressing the grinding wheel?

a. High-speed tool

b. Diamond

c. Carbide

d. Dressing stick

.....
18. | L5 | a | Olivo | 0890 | C | C.S. |

What is one cause of grinding wheel chatter?

a. Poorly dressed wheel

b. Wheel that is too soft

c. Too much coolant

d. Too strong a magnet

.....
19. | L5 | b | Olivo | 0890 | C | C.S. |

A wheel that is out-of-balance will not cause chatter.

a. True

b. False

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.....
20. | L6 | b | IML Mod. 7 | 0890 | C | C.S. |

On a tool and cutter grinder, where should the wheel center line be (relative to the center line of the cutter) while the wheel is rotating toward the cutting edge?

a. Above

b. Below

c. On

d. None of the above

.....
21. | L6 | c | IML Mod. 7 | 0890 | C | C.S. |

What will happen if the cutter relief angle is too large?

a. No sharpening

b. Poor finish on cutter

c. Heat build-up

d. Damage to wheel

.....
22. | L6 | b | IML Mod. 7 | 0890 | C | C.S. |

When measuring clearance angles on a rotary cutting tool, which method is faster and measures directly in degrees?

a. Indicator drop

b. Clearance gage

c. Drill gage

d. None of the above

.....
23. | L7 | b | Olivo | 0890 | C | C.S. |

A long cutter grinding arbor is used for light grinding.

a. True

b. False

.....
24. | L7 | a | Olivo | 0890 | C | C.S. |

Internal grinding can be done by adding an internal grinding spindle to a tool post grinder.

a. True

b. False

.....
25. | L7 | b | IML Mod. 7 | 0890 | C | C.S. |

Most cutters do not need a secondary clearance angle.

a. True

b. False

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.....

1. | L1, K1 | b | IML Mod. 7 | 0890 | C | C.S. |

How long should a grinding wheel run at full speed before work is started?

15 sec.

) sec.

3 sec.

min.

.....

2. | L1, K1 | c | IML Mod. 7 | 0890 | C | C.S. |

What type of eye protection should be worn at all times in the shop?

a. Contacts

b. Face shield

c. Safety glasses with side shields

d. Sun glasses

.....

3. | L1, K1 | a | IML Mod. 7 | 0890 | A | C.S. |

What is the best advice regarding stopping a grinding wheel after it has been turned off?

a. Never stop the wheel with hands.

b. Stop a slow-moving wheel with hands.

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.....
4. | L1, K1 | c | IML Mod. 7 | 0890 | A | C.S. |

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c. Report to instructor.

d. Go home without reporting it.

.....
5. | L1 | a | Olivo | 0890 | C | C.S. |

While running a cutter grinder, the operator should be very careful not to hit tooling.

a. True

b. False

.....
6. | L1 | b | Olivo | 0890 | A | C.S. |

Sharpened cutters can be handled without a rag or gloves.

a. True

b. False

.....
7. | L1 | a | Olivo | 0890 | A | C.S. |

If a grinding wheel has been dropped, it should be ring-tested before mounting it on the machine.

a. True

b. False

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.....
8. | L2 | a | IML Mod. 7 | 0890 | C | C.S. |

The grinder should be clean and oiled for best operation.

a. True

b. False

.....
9. | L2 | b | IML Mod. 7 | 0890 | A | C.S. |

The grinder should be cleaned with an air hose.

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b. False

.....
10. | L2 | a | IML Mod. 7 | 0890 | A | C.S. |

The operator should take time to check the grinding machine for any loose or broken parts.

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b. False

.....
11. | L3, K4 | b | Olivo | 0890 | C | C.S. |

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b. Cracks

c. Oil

d. Age

.....
12. | L3 | a | Olivo | 0890 | C | C.S. |

Before putting the grinding wheel on the spindle, inspect it for blotters.

a. True

b. False

.....
13. | L3 | b | Olivo | 0890 | C | C.S. |

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b. False

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.....

14. | L4 | d | Olivo | 0890 | C | C.S. |

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b. Fine

c. Hard

d. Soft

.....

15. | L4 | c | Olivo | 0890 | C | C.S. |

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.....

16. | L4 | c | Olivo | 0890 | C | C.S. |

What does the operator wipe off before mounting a grinding wheel?

a. Table

b. Dresser

c. Flange

d. Hand wheel

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.....

1. | M1 | a | IML Mod. 8 | 0890 | C | B.D. |

How should chips be removed from a CNC machine?

a. Brush or hook

b. Compressed air

c. Gloves

d. Oil rag

.....

2. | M1 | a | IML Mod. 8 | 0890 | C | B.D. |

What should be done if the tool breaks or a crash is imminent on a CNC machine?

a. Push the emergency stop button.

b. Notify the instructor.

c. Rewind the program.

d. Go to manual data input.

.....

3. | M1 | a | IML Mod. 8 | 0890 | C | B.D. |

On manual tool change CNC machines, when should the tool be changed?

a. When all rotary and table motion has stopped

b. At the end of the program

c. Before the finish cut

d. By pushing the program hold button

.....
4. | M2 | d | IML Mod. 8 | 0890 | C | B.D. |

When should lubrication and maintenance procedures be performed on a CNC machine?

a. At the end of the day

b. When the computer indicates an error code

c. Before a major malfunction

d. According to the manufacturer's specifications

.....
5. | M2 | a | IML Mod. 8 | 0890 | C | B.D. |

When should chips be removed from a CNC machine?

a. As necessary

b. When they reach the top of the tray

c. After they have cooled off

d. At the end of the week

.....
6. | M2 | a | IML Mod. 8 | 0890 | C | B.D. |

How should tools such as hammers, micrometers, wrenches, etc., be used on a CNC machine?

a. Remove them from the machine immediately after use.

b. Remove them from the cutter path.

c. Leave them on the machine table.

d. They are not needed on a CNC machine.

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.....

7. | M3 | c | APS | 0890 | C | B.D. |

Before any program can be put into a CNC machine, what must be done with the print?

a. Make backup copies.

b. File it in the print drawer.

c. Define all geometry.

d. Define all terms.

.....

8. | M3 | b | IML Mod. 8 | 0890 | C | B.D. |

What is the basis of the coordinate measuring system for CNC-operated milling and punch machines?

a. Orthogonal

b. Cartesian

c. Point to point

d. Incremental

.....

9. | M3 | a | IML Mod. 8 | 0890 | C | B.D. |

On a CNC machine, to what do c, w, x, y, and z refer?

a. Axis movements

b. Quadrants

c. Isometric projections

d. Trigonometric construction

.....
10. | M4 | a | APS | 0890 | C | B.D. |

What are the G codes that allow the controller to interpret block data called?

a. Preparatory

b. Fixed block format

c. Word address

d. Block buffer

.....
11. | M4 | b | APS | 0890 | C | B.D. |

On a milled part, how much does cutter compensation offset the tool path from the machined surface?

a. .002"

b. The cutter radius

c. The diameter of the tool

d. The length of the tool

.....
12. | M4 | b | Repp | 0890 | C | B.D. |

What is the process of checking correctness of a new program on the machine?

a. Coordinate dimensioning

b. Dry run

c. Linear interpolation

d. Sequence determination

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.....
13. | M5 | a | Repp | 0890 | C | B.D. |

From what point are all absolute control systems measured and programmed?

a. Machine table reference point (home)

b. Set-up point

c. Part reference point

d. Point of incidence

.....
14. | M5 | d | IML Mod. 8 | 0890 | C | B.D. |

What does the tool inventory sheet for a CNC program designate?

a. Available tooling for the system

b. Cost and number of tools in stock

c. Where the tools are located in the shop

d. Tool diameter, length, flutes, helix, rotation, grind

.....
15. | M5 | a | IML Mod. 8 | 0890 | C | B.D. |

Why is a fixture or jig used to hold multiple pieces for machining?

a. To establish common datums

b. Because they are inexpensive to make

c. Because parts are kept cooler during machining

d. To eliminate extreme axis limits

.....
16. | M6 | a | IML Mod. 8 | 0890 | C | B.D. |

What must be done to a typical fixture on a CNC machine before the next part is put in it?

a. Remove chips and foreign materials.

b. Re-indicate for accuracy.

c. Re-home the machine axis.

d. Take full increments of .005".

.....
17. | M6 | d | IML Mod. 8 | 0890 | C | B.D. |

Which step is NOT critical when setting up multiple tools for CNC usage?

a. Check proper tool for number and position.

b. Set tool length offset for each tool.

c. Clean and check all tools before they are used.

d. Omit the steps that involve a missing tool.

.....
18. | M6 | d | IML Mod. 8 | 0890 | C | B.D. |

When manual override is used to modify the program, what should be done?

a. Observe the cutter chip response to the altered speed/feed.

b. Note or highlight changes on operator instruction sheet.

c. Determine the speed/feed increase or decrease.

d. All of the above

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.....

1. | Leadership 1 | c | VICA | 0889 | C | Fred Smith |

Why should students NOT enroll in occupational training programs?

a. To work toward a career

b. To develop business and industry contacts

c. To avoid taking math, science, or English classes

d. To work toward financial independence

.....

2. | Leadership 1 | a | VICA | 0889 | C | Fred Smith |

Only one VICA club per school is allowed.

a. True

b. False

.....

3. | Leadership 1 | d | VICA | 0889 | C | Fred Smith |

How many VICA districts does Missouri have?

a. 3

b. 5

c. 7

d. 9

.....
4. | Leadership 1 | b | VICA | 0889 | C | Fred Smith |

In which national VICA region is Missouri located?

a. 3

b. 4

c. 5

d. 6

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.....

5. | Leadership 2 | b | VICA | 0889 | C | Fred Smith |

Personal values rarely affect career choices.

a. True

b. False

.....

6. | Leadership 2 | a | VICA | 0889 | C | Fred Smith |

A career should align with one's personal values, interests, and abilities.

a. True

b. False

.....
7. | Leadership 3 | b | VICA | 0889 | C | Fred Smith |

Effective decision making can be broken down into six steps.

a. True

b. False

.....
8. | Leadership 3 | b | VICA | 0889 | C | Fred Smith |

A new supervisor should be liked by all workers in order to be effective.

a. True

b. False

.....
9. | Leadership 3 | d | VICA | 0889 | C | Fred Smith |

Which goal should a supervisor work toward in order to succeed and improve worker moral?

a. Keep attention on getting work done

b. Be as fair as possible

c. Avoid taking a worker's negative feelings personally

d. All the above

.....
10. | Leadership 3 | a | VICA | 0889 | C | Fred Smith |

To be more productive, workers need ways to measure and use time more effectively.

a. True

b. False

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.....

11. | Leadership 4 | d | VICA | 0889 | C | Fred Smith |

Which trait or traits do employers expect from their employees?

a. Cooperation and acceptance of evaluation

b. Honesty

c. Initiative

d. All the above

.....

12. | Leadership 4 | d | VICA | 0889 | C | Fred Smith |

Which characteristic should employees expect from their employers?

a. Understanding of job requirements

b. Fair payment for labor

c. Equal treatment for all employees

d. All of the above

.....

13. | Leadership 4 | a | VICA | 0889 | C | Fred Smith |

Effective communication, care for people, flexibility, dependability, optimism, and perseverance are traits of good leaders.

a. True

b. False

.....
14. | Leadership 5 | a | VICA | 0889 | C | Fred Smith |

Good table manners include entering into table conversation.

a. True

b. False

.....
15. | Leadership 5 | b | VICA | 0889 | C | Fred Smith |

A coat room clerk at a restaurant is usually NOT tipped.

a. True

b. False

.....
16. | Leadership 5 | a | VICA | 0889 | C | Fred Smith |

Employees should stand when an authority figure (employer) joins them for a meal.

a. True

b. False

Field	Contents	Field	Contents
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4	Source (author, year of publication)	8	Accompanying artwork (ART)

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17. | Leadership 6 | b | VICA | 0889 | C | Fred Smith |

It is a good idea to use big words when writing in order to impress people.

a. True

b. False

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18. | Leadership 6 | a | VICA | 0889 | C | Fred Smith |

Self-concept affects verbal communication.

a. True

b. False

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19. | Leadership 6 | a | VICA | 0889 | C | Fred Smith |

When speaking, always use a vocabulary that others can understand.

a. True

b. False

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20. | Leadership 7 | a | VICA | 0889 | C | Fred Smith |

Professionals respect themselves and others.

a. True

b. False

.....
21. | Leadership 7 | a | VICA | 0889 | C | Fred Smith |

A person's code of ethics defines his or her principles or standards of right and wrong.

a. True

b. False

.....
22. | Leadership 7 | a | VICA | 0889 | C | Fred Smith |

A professional code of ethics includes both legal and moral standards.

a. True

b. False

Field	Contents	Field	Contents
1	Unique item number	5	Date (MMYY)
2	Duty area and task number (Mo. competency profile)	6	Learning domain (Cognitive, Affective, Psychomotor)
3	Letter of correct answer	7	Writer(s)/reviewer(s)
4	Source (author, year of publication)	8	Accompanying artwork (ART)

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23. | Leadership 8 | a | VICA | 0889 | C | Fred Smith |

Appropriate business dress for women would include a skirt.

a. True

b. False

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24. | Leadership 8 | a | VICA | 0889 | C | Fred Smith |

Appropriate business attire for men would include a traditional dark suit.

a. True

b. False

.....

25. | Leadership 8 | a | VICA | 0889 | C | Fred Smith |

Fashion accessories reflect the self-image of an individual.

a. True

b. False

.....

26. | Leadership 8 | a | VICA | 0889 | C | Fred Smith |

Getting plenty of sleep and avoiding junk food can improve personal appearance.

a. True

b. False

.....
27. | Leadership 9 | a | VICA | 0889 | C | Fred Smith |

A resume is a well-organized overview of what one has to offer an employer.

a. True

b. False

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28. | Leadership 9 | a | VICA | 0889 | C | Fred Smith |

A letter of application should ask an employer for an interview.

a. True

b. False

.....
29. | Leadership 9 | a | VICA | 0889 | C | Fred Smith |

The local chamber of commerce can help people research employers.

a. True

b. False

Field	Contents	Field	Contents
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30. | Leadership 10 | a | VICA | 0889 | C | Fred Smith |

When parliamentary procedures are used at a meeting, only one subject at a time should be discussed.

a. True

b. False

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31. | Leadership 10 | a | VICA | 0889 | C | Fred Smith |

Parliamentary procedure calls for the finishing of old business before new business is started.

a. True

b. False

.....

32. | Leadership 10 | a | VICA | 0889 | C | Fred Smith |

Parliamentary procedure calls for standing committee reports to be given before special committee reports.

a. True

b. False

.....
33. | Leadership 10 | a | VICA | 0889 | C | Fred Smith |

Proper use of the gavel signals members to stand or sit.

a. True

b. False